

GOT1000

Graphic Operation Terminal

Extended/Option Functions Manual

● SAFETY PRECAUTIONS ●

(Always read these precautions before using this equipment.)

Before using this product, please read this manual and the relevant manuals introduced in this manual carefully and pay full attention to safety to handle the product correctly.

The precautions given in this manual are concerned with this product.

In this manual, the safety precautions are ranked as "DANGER" and "CAUTION".




DANGER

Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.



CAUTION

Indicates that incorrect handling may cause hazardous conditions, resulting in medium or slight personal injury or physical damage.

Note that the  caution level may lead to a serious accident according to the circumstances. Always follow the instructions of both levels because they are important to personal safety.

Please save this manual to make it accessible when required and always forward it to the end user.

[DESIGN PRECAUTIONS]

DANGER

- Some failures of the GOT, communication unit or cable may keep the outputs on or off.
An external monitoring circuit should be provided to check for output signals which may lead to a serious accident.
Not doing so can cause an accident due to false output or malfunction.
- If a communication fault (including cable disconnection) occurs during monitoring on the GOT, communication between the GOT and controller is suspended and the GOT becomes inoperative.
For bus connection: The CPU becomes faulty and the GOT becomes inoperative.
For other than bus connection: The GOT becomes inoperative.
A system where the GOT is used should be configured to perform any significant operation to the system by using the switches of a device other than the GOT on the assumption that a GOT communication fault will occur.
Not doing so can cause an accident due to false output or malfunction.
- Do not use the GOT as the warning device that may cause a serious accident.
An independent and redundant hardware or mechanical interlock is required to configure the device that displays and outputs serious warning.
Failure to observe this instruction may result in an accident due to incorrect output or malfunction.

[DESIGN PRECAUTIONS]

DANGER

- Incorrect operation of the touch switch(s) may lead to a serious accident if the GOT backlight is gone out.

When the GOT backlight goes out, the POWER LED flickers (green/orange) and the display section turns black and causes the monitor screen to appear blank, while the input of the touch switch(s) remains active.

This may confuse an operator in thinking that the GOT is in "screensaver" mode, who then tries to release the GOT from this mode by touching the display section, which may cause a touch switch to operate.

Note that the following occurs on the GOT when the backlight goes out.

- The POWER LED flickers (green/orange) and the monitor screen appears blank

CAUTION

- Do not bundle the control and communication cables with main-circuit, power or other wiring.
Run the above cables separately from such wiring and keep them a minimum of 100mm (3.94in.) apart. Not doing so noise can cause a malfunction.

[MOUNTING PRECAUTIONS]

DANGER

- Be sure to shut off all phases of the external power supply used by the system before mounting or removing the GOT main unit to/from the panel.
Not doing so can cause the unit to fail or malfunction.
- Be sure to shut off all phases of the external power supply used by the system before mounting or removing the communication unit, option function board or multi-color display board onto/from the GOT.
Not doing so can cause the unit to fail or malfunction.
- When installing the multi-color display board, wear an earth band etc. to avoid the static electricity. Not doing so can cause a unit corruption.

CAUTION

- Use the GOT in the environment that satisfies the general specifications described in this manual.
Not doing so can cause an electric shock, fire, malfunction or product damage or deterioration.
- When mounting the GOT to the control panel, tighten the mounting screws in the specified torque range.
Undertightening can cause the GOT to drop, short circuit or malfunction.
Overtightening can cause a drop, short circuit or malfunction due to the damage of the screws or the GOT.

[MOUNTING PRECAUTIONS]



CAUTION

- When loading the communication unit to the GOT, fit it to the connection interface of the GOT and tighten the mounting screws in the specified torque range.
Undertightening can cause the GOT to drop, short circuit or malfunction.
Overtightening can cause a drop, failure or malfunction due to the damage of the screws or unit.
- When mounting the multi-color display board onto the GOT, tighten the mounting screws within the specified torque range.
Loose tightening may cause the unit and/or GOT to malfunction due to poor contact.
Overtightening may damage the screws, unit and/or GOT; they might malfunction.
- Push the option function board onto the corresponding connector until it clicks, so that it will be secured firmly.
- Push the multi-color display board onto the corresponding connector so that it will be secured firmly.
- When inserting a CF card into the GOT, push it into the insertion slot until the CF card eject button will pop out.
Failure to do so may cause a malfunction due to poor contact.
- When inserting/removing a CF card into/from the GOT, turn the CF card access switch off in advance.
Failure to do so may corrupt data within the CF card.
- When removing a CF card from the GOT, make sure to support the CF card by hand, as it may pop out.
Failure to do so may cause the CF card to drop from the GOT and break.

[WIRING PRECAUTIONS]



DANGER

- Be sure to shut off all phases of the external power supply used by the system before wiring.
Failure to do so may result in an electric shock, product damage or malfunctions.

[WIRING PRECAUTIONS]

CAUTION

- Always ground the FG terminal, LG terminal, and protective ground terminal of the GOT power to the protective ground conductors dedicated to the GOT.
Not doing so may cause an electric shock or malfunction.
- Terminal screws which are not to be used must be tightened always at torque 0.5 to 0.8 N·m.
Otherwise there will be a danger of short circuit against the solderless terminals.
- Use applicable solderless terminals and tighten them with the specified torque.
If any solderless spade terminal is used, it may be disconnected when the terminal screw comes loose, resulting in failure.
- Correctly wire the GOT power supply section after confirming the rated voltage and terminal arrangement of the product.
Not doing so can cause a fire or failure.
- Tighten the terminal screws of the GOT power supply section in the specified torque range.
Undertightening can cause a short circuit or malfunction.
Overtightening can cause a short circuit or malfunction due to the damage of the screws or the GOT.
- Exercise care to avoid foreign matter such as chips and wire offcuts entering the GOT. Not doing so can cause a fire, failure or malfunction.
- Plug the bus connection cable by inserting it into the connector of the connected unit until it "clicks".
After plugging, check that it has been inserted snugly.
Not doing so can cause a malfunction due to a contact fault.
- Plug the communication cable into the connector of the connected unit and tighten the mounting and terminal screws in the specified torque range.
Undertightening can cause a short circuit or malfunction.
Overtightening can cause a short circuit or malfunction due to the damage of the screws or unit.

[TEST OPERATION PRECAUTIONS]

DANGER

- When testing the operation (e.g. turning bit devices ON/OFF or changing a current word device value, a current or set timer/counter value, or a current buffer memory value), thoroughly read the relevant manual to fully understand the operating procedures. When testing, never change the data of the devices that control the operation essential for the system.
False output or malfunction can cause an accident.

[STARTUP/MAINTENANCE PRECAUTIONS]

DANGER

- When power is on, do not touch the terminals.
Doing so can cause an electric shock or malfunction.
- Connect the battery correctly.
Do not discharge, disassemble, heat, short, solder or throw the battery into the fire.
Incorrect handling may cause the battery to generate heat, burst or take fire, resulting in injuries or fires
- Before starting cleaning or terminal screw retightening, always switch off the power externally in all phases.
Not switching the power off in all phases can cause a unit failure or malfunction.
Undertightening can cause a short circuit or malfunction.
Overtightening can cause a short circuit or malfunction due to the damage of the screws or unit.

CAUTION

- Do not disassemble or modify the unit.
Doing so can cause a failure, malfunction, injury or fire.
- Do not touch the conductive and electronic parts of the unit directly.
Doing so can cause a unit malfunction or failure.
- The cables connected to the unit must be run in ducts or clamped.
Not doing so can cause the unit or cable to be damaged due to the dangling, motion or accidental pulling of the cables or can cause a malfunction due to a cable connection fault.
- When unplugging the cable connected to the unit, do not hold and pull the cable portion.
Doing so can cause the unit or cable to be damaged or can cause a malfunction due to a cable connection fault.
- Do not drop the module or subject it to strong shock.
A module damage may result.
- Do not drop or give an impact to the battery mounted to the unit.
Doing so may damage the battery, causing the battery fluid to leak inside the battery.
If the battery is dropped or given an impact, dispose of it without using.
- Before touching the unit, always touch grounded metal, etc. to discharge static electricity from human body, etc.
Not doing so can cause the unit to fail or malfunction.

[BACKLIGHT REPLACEMENT PRECAUTIONS]

DANGER

- Be sure to shut off all phases of the external power supply of the GOT (and the controller in the case of a bus topology) and remove the GOT from the control panel before replacing the backlight (when using the GOT with the backlight replaceable by the user).
Not doing so can cause an electric shock.
Replacing a backlight without removing the GOT from the control panel can cause the backlight or control panel to drop, resulting in an injury.

[BACKLIGHT REPLACEMENT PRECAUTIONS]

CAUTION

- Wear gloves for the backlight replacement when using the GOT with the backlight replaceable by the user.
Not doing so can cause an injury.
- Before replacing a backlight, allow 5 minutes or more after turning off the GOT when using the GOT with the backlight replaceable by the user.
Not doing so can cause a burn from heat of the backlight.

[DISPOSAL PRECAUTIONS]

CAUTION

- When disposing of the product, handle it as industrial waste.

[TRANSPORTATION PRECAUTIONS]

CAUTION

- When transporting lithium batteries, make sure to treat them based on the transport regulations.
(Refer to Appendix 3 for details of the regulated units.)
- Make sure to transport the GOT main unit and/or relevant unit(s) in the manner they will not be exposed to the impact exceeding the impact resistance described in the general specifications of this manual, as they are precision devices.
Failure to do so may cause the unit to fail.
Check if the unit operates correctly after transportation.

REVISIONS

* The manual number is given on the bottom left of the back cover.

Print Date	* Manual Number	Revision
Mar., 2005	SH(NA)-080544ENG-A	First edition
Oct., 2005	SH(NA)-080544ENG-B	<p>Compatible with GT Designer2 Version2.18U.</p> <p>Partial corrections</p> <p>Abbreviations and generic terms in this manual, Chapter1, Section 1.1.1, 1.1.2, 1.1.3, 2.1, 2.2.1, 2.2.2, 2.3.1, 2.4.2, 2.4.3, 2.4.4, 2.4.5, 2.5, 2.5.1, 2.5.3, 2.6.1, 2.7.1, 2.8.1, 2.9.2, 2.9.3, 2.9.4, 2.9.5, 3.1, 3.2.1, 3.2.2, 3.3, 3.3.1, 3.3.2, 3.3.3, 3.4.1, 3.8, 4.1, 4.2.1, 4.3, 4.3.1, 4.3.2, 4.4.1, 4.4.2, 4.4.7, 4.7.3, App.1, INDEX</p> <p>Partial additions</p> <p>Section 2.6, 2.7, 2.8, 3.4, 3.5.4</p> <p>Additions</p> <p>Section 2.2.3, 3.2.3, 3.2.4, 4.2.2, 4.4.6, Chapter 5, 6, 7, 8, 9, 10</p> <p>Section 2.2.3 → 2.2.4, Section 5.1 → 2.10, Section 3.3.4 → 3.3.3, Section 3.4.3 → 3.4.2, Section 4.2.2 → 4.2.3, Section 4.4.6 → 4.4.7, Section 4.4.7 → 4.4.8, Section 5.2 → 3.8, Section 5.3 → 4.7</p>
Jan., 2006	SH(NA)-080544ENG-C	<p>Compatible with GT Designer2 Version2.27D.</p> <p>Partial corrections</p> <p>About Manuals, Abbreviations and generic terms in this manual, How to read this manual, Section 3.1, 3.4.2, 4.4.6, 5.4.12, 7.4.1, 8.4.11, 9.2.1, 9.4.8, 10.2.1, App1</p> <p>Additions</p> <p>Section 1.1.4, 3.5.7</p>
Jun., 2006	SH(NA)-080544ENG-D	<p>Compatible with GT Designer2 Version2.32J.</p> <p>Partial corrections</p> <p>About Manuals, Abbreviations and generic terms in this manual, How to read this manual, Section 1.1.1, 1.1.2, 2.3.1, 3.2.1, 3.3.2, 4.1, 5.1, 5.3, 6.1, 6.2.2, 6.4.1, 6.4.2, 7.1, 7.2.1, 7.2.4, 8.2.1, 8.4.2, 8.4.11, 10.2.1, 10.2.3, App1</p> <p>Additions</p> <p>Chapter 1, Section 2.1, 3.2.4, 8.2.3, 9.2.1</p>
Nov., 2006	SH(NA)-080544ENG-E	<p>Compatible with GT Designer2 Version2.43V.</p> <p>Partial corrections</p> <p>Section 2.2.4, 3.1, 3.2.4, 3.3.2, 3.6, 3.8, 6.2.2, 7.2.3, 8.2.2</p> <p>Partial additions</p> <p>Section 3.3.1, 3.3.3, 3.4.1</p>

(Continued to next page)

Print Date	* Manual Number	Revision
May, 2007	SH(NA)-080544ENG-F	<p>Compatible with GT Designer2 Version 2.58L</p> <p>Partial corrections</p> <p>Section 1.1.1, 1.1.2, 2.1, 2.2.1, 2.5.1, 2.6.1, 2.7.1, 2.8.1, 2.9.3, 3.1, 3.2.1, 3.2.4, 3.3.1, 3.3.3, 3.3.4, 3.4.1, 3.4.2, 3.5.1 to 3.5.7, 3.6.1 to 3.6.7, 3.7.1, 4.2.1, 5.2.1, 5.3, 5.4.9 to 5.4.11, 7.1, 8.2.1, 8.4.11, 9.2.1, 9.4.8</p> <p>Partial additions</p> <p>Section 5.2.3, 5.4.1</p> <p>Additions</p> <p>Section 3.3.5, 3.8, 5.4.12, 14.10, Chapter 11</p> <p>Section 3.8 → 3.9, Section 5.4.12 → 5.4.13, Section 5.4.13 → 5.4.14</p>
Aug., 2007	SH(NA)-080544ENG-G	<p>Compatible with GT Designer2 Version 2.63R</p> <p>Partial corrections</p> <p>Section 3.2.1, 8.2.3, 8.3, 8.4.1, 8.4.6</p> <p>Partial additions</p> <p>Chapter 1, Section 1.1.1, 1.1.2, 1.1.4, 2.2.3, 3.2.2, 3.2.3, 3.2.4, 6.2.2, 6.2.3, 8.2.1, 8.4.4, 10.2.1, 10.2.2, 10.2.3, 10.4, 10.5, 11.2.1, App1</p> <p>Additions</p> <p>Section 11.5, Chapter 12</p> <p>Section 11.5 → 11.6</p>
Dec., 2007	SH(NA)-080544ENG-H	<p>Compatible with GT Designer2 Version 2.72A</p> <p>Partial corrections</p> <p>Section 1.1.3, 1.1.4, 3.2.1, 3.3.3, 10.2, 10.2.1, 11.3.1, 11.3.2, 11.4.1, 11.5.2, 11.5.3, 12.4</p> <p>Partial additions</p> <p>Section 1.1.1, 1.1.2, 2.1, 2.3.1, 3.2.4, 3.4.1, 11.1, 11.2.1, 11.2.3, 11.3.3</p> <p>Additions</p> <p>Section 11.3.4</p>
Feb., 2008	SH(NA)-080544ENG-I	<p>Compatible with GT Designer2 Version 2.77F</p> <p>Partial corrections</p> <p>Section 1.1.3, 2.2.3, 3.2.3, 7.2.3</p> <p>Partial additions</p> <p>Chapter 1, Section 1.1.1, 1.1.2, 1.1.4, 2.2.1, 3.1, 3.2.1, 6.2.1, 6.2.2, 7.1, 7.2.1, 7.2.2, 7.2.4, 7.4.1 to 7.4.9, 8.2, App1</p> <p>Additions</p> <p>Chapter 13</p>

(Continued to next page)

Print Date	* Manual Number	Revision
Jun., 2008	SH(NA)-080544ENG-J	Compatible with GT Designer2 Version 2.82L <div>Partial corrections</div> Section 3.2.2, 3.7, 6.4.4, 7.2.1, 11.2.1, 11.3.3 <div>Partial additions</div> Section 1.1.1, 1.1.2, 2.2.1, 3.2.4, 6.2.1, 6.3, 6.4.1, 6.4.2, 6.4.3, 11.2.3, 11.6, 13.2.1, App1
Oct., 2008	SH(NA)-080544ENG-K	Compatible with GT Designer2 Version 2.90U. <div>Partial corrections</div> Section 1.1.3, 2.1, 2.3.1, 3.3.1, 4.4.1, 5.5, 6.3, 7.3, 8.3, 9.3, 10.3, 11.1, 11.3.1, 11.3.4, 11.4.1, 11.4.3, 11.6, 12.3, 13.1, 13.3.1, 13.5.1, 13.5.2, 13.6.1, 13.6.3, 13.7.1 → 13.7.3 <div>Partial additions</div> Section 1.1.1, 1.1.2, 2.2.1, 3.2.1, 3.5.4, 4.1, 4.2.1, 4.3.1, 4.4.6, 5.1, 5.2.3, 5.3, 5.4.1, 5.4.10, 5.4.13, 6.2.1, 7.2.1, 8.2.1, 9.2.1, 10.2.1, 10.2.3, 11.2.1, 11.3.2, 12.2.3, 13.2.1, 13.2.2, 13.8, 13.9, App1

Japanese Manual Version SH-080541-N

This manual confers no industrial property rights or any rights of any other kind, nor does it confer any patent licenses. Mitsubishi Electric Corporation cannot be held responsible for any problems involving industrial property rights which may occur as a result of using the contents noted in this manual.

INTRODUCTION

Thank you for choosing Mitsubishi Graphic Operation Terminal (Mitsubishi GOT).

Read this manual and make sure you understand the functions and performance of the GOT thoroughly in advance to ensure correct use.

CONTENTS

SAFETY PRECAUTIONS	A - 1
REVISIONS.....	A - 7
INTRODUCTION.....	A - 10
CONTENTS	A - 10
About Manuals	A - 18
ABBREVIATIONS AND GENERIC TERMS.....	A - 20
How to read this manual	A - 24

1. OVERVIEW

1 - 1 to 1 - 12

1.1 Before Using Each Function	1 - 2
1.1.1 Each function and related manuals	1 - 2
1.1.2 Hardware and OS' required for each function	1 - 4
1.1.3 Outline of procedure to the operation of each function.....	1 - 10
1.1.4 Displayable languages for each function	1 - 12

2. SYSTEM MONITOR

2 - 1 to 2 - 56

2.1 Features	2 - 1
2.2 Specifications	2 - 6
2.2.1 System configuration	2 - 6
2.2.2 Devices that can be monitored	2 - 14
2.2.3 Access range	2 - 14
2.2.4 Precautions.....	2 - 14
2.3 Display	2 - 16
2.3.1 Outline until starting the system monitor.....	2 - 16
2.4 Operation Procedure Common to the System Monitor Screens	2 - 19
2.4.1 Functional change menu screen.....	2 - 19
2.4.2 Entering monitor devices (specifying monitor stations and devices)	2 - 20
2.4.3 Key window setting columns and operation procedure	2 - 23
2.4.4 Switching the display format (DEC/HEX) and comment/no-comment display.....	2 - 24
2.4.5 Quick test operation of monitor devices.....	2 - 26
2.4.6 Changing screens.....	2 - 30
2.5 Entry Monitor	2 - 31
2.5.1 Information displayed on the Entry Monitor screen and key functions	2 - 31
2.5.2 Procedure for entry monitor basic operation.....	2 - 34
2.5.3 Deleting entry devices	2 - 35
2.6 Batch Monitor	2 - 36
2.6.1 Information displayed on the Batch Monitor screen and key functions.....	2 - 36
2.6.2 Procedure for batch monitor basic operation.....	2 - 40

2.7	TC Monitor (Monitoring Timers and Counters)	2 - 41
2.7.1	Information displayed on the TC Monitor screen and key functions	2 - 41
2.7.2	Procedure for TC monitor basic operation.....	2 - 44
2.7.3	Procedure for canceling TC monitor keywords.....	2 - 45
2.8	BM Monitor (Monitoring Buffer Memory)	2 - 46
2.8.1	Information displayed on the BM Monitor screen and key functions	2 - 46
2.8.2	Procedure for BM monitor basic operation	2 - 48
2.9	Test Operation	2 - 49
2.9.1	Procedure for displaying the test menu screen and the setting key window screen	2 - 49
2.9.2	Information displayed on the test menu screen and key functions	2 - 50
2.9.3	Information and set items displayed on each setting key window screen	2 - 51
2.9.4	Test operation procedure	2 - 53
2.9.5	Test operation basic procedure	2 - 55
2.10	Error Messages and Corrective Action	2 - 56

3. LADDER MONITOR FUNCTION **3 - 1 to 3 - 74**

3.1	Features	3 - 1
3.2	Specifications	3 - 4
3.2.1	System configuration	3 - 4
3.2.2	Devices and range that can be monitored.....	3 - 9
3.2.3	Access range.....	3 - 11
3.2.4	Precautions.....	3 - 11
3.3	Display	3 - 15
3.3.1	Outline until the start.....	3 - 15
3.3.2	Setting and deleting media for saving ladder data	3 - 20
3.3.3	Display.....	3 - 21
3.3.4	Searching from the monitor screen	3 - 31
3.3.5	Reading comment files from CF cards	3 - 36
3.4	Operation Procedure Common	3 - 37
3.4.1	Information and key functions displayed on the screen.....	3 - 37
3.4.2	Hard copy output	3 - 44
3.5	Switching the Display Format	3 - 45
3.5.1	Display switching of 16-bit (one-word)/32-bit (two-word) modules	3 - 45
3.5.2	Display switching of decimal numbers/hexadecimal numbers.....	3 - 46
3.5.3	Switching comment/no-comment display	3 - 47
3.5.4	Displaying 32 characters of comments.....	3 - 48
3.5.5	Displaying notes	3 - 50
3.5.6	Displaying statements	3 - 51
3.5.7	Language switching of the sequence program (MELSEC-Q/QnA ladder monitor).....	3 - 52
3.6	Search Operation	3 - 54
3.6.1	Device search.....	3 - 55
3.6.2	Contact point search.....	3 - 57
3.6.3	Coil search.....	3 - 59
3.6.4	Step search	3 - 61
3.6.5	Ladder end search.....	3 - 62
3.6.6	Defect search	3 - 63
3.6.7	Touch search.....	3 - 67
3.7	Test Operation	3 - 69
3.7.1	Displaying the test menu screen	3 - 69
3.8	Local Device Monitor	3 - 70

3.8.1	Operation procedure for local device monitor.....	3 - 70
3.9	Error Messages and Corrective Action.....	3 - 73

4. MELSEC-A LIST EDITOR 4 - 1 to 4 - 38

4.1	Features.....	4 - 1
4.2	Specifications.....	4 - 3
4.2.1	System configuration	4 - 3
4.2.2	Access range	4 - 4
4.2.3	Precautions.....	4 - 5
4.3	Display.....	4 - 6
4.3.1	Outline until the start.....	4 - 6
4.3.2	Operation of keyword input.....	4 - 8
4.4	Operation Methods.....	4 - 10
4.4.1	Key arrangement and a list of key functions.....	4 - 10
4.4.2	Display format of the display area	4 - 12
4.4.3	Switching valid keys (upper/lower functions)	4 - 15
4.4.4	Selection and operation of modes	4 - 15
4.4.5	Command input procedures	4 - 16
4.4.6	Hard copy output	4 - 19
4.4.7	Action if an incorrect key is input	4 - 19
4.4.8	List of functions.....	4 - 20
4.5	Basic Operation.....	4 - 21
4.5.1	Reading sequence programs.....	4 - 21
4.5.2	Changing (Overwriting) commands	4 - 22
4.5.3	Adding (Inserting) commands.....	4 - 23
4.5.4	Deleting commands	4 - 24
4.5.5	Using the help function	4 - 25
4.5.6	PLC memory all clear	4 - 27
4.6	List of Operation Procedures.....	4 - 28
4.6.1	Common operation	4 - 28
4.6.2	Operation in write mode (W).....	4 - 29
4.6.3	Operation in read mode (R)	4 - 29
4.6.4	Operation in insert mode (I)	4 - 30
4.6.5	Operation in delete mode (D)	4 - 30
4.6.6	Operation in parameter mode (P)	4 - 31
4.6.7	Operation in other mode (O).....	4 - 32
4.7	Error Messages and Corrective Actions.....	4 - 33
4.7.1	Error messages and corrective actions in direct CPU connection.....	4 - 33
4.7.2	PLC CPU error messages and troubleshooting.....	4 - 36
4.7.3	Error using list editor function on the link system	4 - 37

5. MELSEC-FX LIST EDITOR 5 - 1 to 5 - 34

5.1	Features.....	5 - 1
5.2	Specifications.....	5 - 3
5.2.1	System configuration	5 - 3
5.2.2	Access range	5 - 5
5.2.3	Precautions.....	5 - 5
5.3	Display.....	5 - 6
5.4	Operation Procedures.....	5 - 9
5.4.1	Key arrangement and a list of key functions.....	5 - 9

5.4.2	Selection and operation of modes	5 - 12
5.4.3	Sequence program display	5 - 13
5.4.4	Searching commands and devices.....	5 - 15
5.4.5	Writing commands.....	5 - 17
5.4.6	Changing operands, set values	5 - 20
5.4.7	Deleting commands.....	5 - 21
5.4.8	Sequence program all clear	5 - 22
5.4.9	PLC diagnostics.....	5 - 23
5.4.10	Parameter setting	5 - 25
5.4.11	Keywords	5 - 28
5.4.12	List monitor	5 - 30
5.4.13	Hard copy output	5 - 32
5.4.14	Action for an incorrect key input	5 - 32
5.5	Error Messages and Corrective Actions	5 - 33

6. INTELLIGENT MODULE MONITOR

6 - 1 to 6 - 116

6.1	Features	6 - 1
6.2	Specifications	6 - 3
6.2.1	System configuration	6 - 3
6.2.2	Access range	6 - 6
6.2.3	Precautions.....	6 - 8
6.3	Display	6 - 11
6.4	Operation of Each Intelligent Module Monitor Screen	6 - 15
6.4.1	Composition of the system configuration screen and key functions	6 - 15
6.4.2	Setting method for other station monitoring.....	6 - 17
6.4.3	Composition of PC Information monitor screen and key functions	6 - 18
6.4.4	Composition of the unit detail info screen and key functions	6 - 22
6.4.5	Composition of the intelligent module monitor screen and key functions	6 - 23
6.4.6	Specifying a module to monitor and selecting monitor menu	6 - 24
6.4.7	Testing of the intelligent function module	6 - 25
6.5	Intelligent Module Monitor Screens	6 - 27
6.5.1	A62DA-S1 module monitoring	6 - 27
6.5.2	A68AD module monitoring.....	6 - 28
6.5.3	A68ADN module monitoring	6 - 29
6.5.4	A68RD module monitoring	6 - 30
6.5.5	A84AD module monitoring.....	6 - 31
6.5.6	A616AD module monitoring.....	6 - 33
6.5.7	A616TD module monitoring.....	6 - 35
6.5.8	A616DAV module monitoring	6 - 38
6.5.9	A616DAI module monitoring.....	6 - 39
6.5.10	A61LS module monitoring	6 - 40
6.5.11	A62LS module monitoring	6 - 41
6.5.12	AD61 module monitoring	6 - 42
6.5.13	AD70 module monitoring	6 - 43
6.5.14	AD70D module monitoring	6 - 45
6.5.15	AD71 module monitoring	6 - 47
6.5.16	AD72/A1SD71 module monitoring.....	6 - 50
6.5.17	AJ71PT32-S3 module monitoring.....	6 - 53
6.5.18	A1SD61 module monitoring.....	6 - 55
6.5.19	A1S64AD module monitoring	6 - 56
6.5.20	A1S62DA module monitoring	6 - 57
6.5.21	A1SD70 module monitoring.....	6 - 58
6.5.22	A1S62RD module monitoring	6 - 59

6.5.23	A1SJ71PT32-S3 module monitoring	6 - 60
6.5.24	A1S63ADA module monitoring	6 - 61
6.5.25	AD75P/A1SD75P module monitoring	6 - 62
6.5.26	AJ71ID1(ID2)-R4/A1SJ71ID1(ID2)-R4 module monitoring.....	6 - 68
6.5.27	A1S68DAV module monitoring	6 - 69
6.5.28	A1S68DAI module monitoring	6 - 70
6.5.29	A1S68AD module monitoring	6 - 71
6.5.30	A1S64TCTT(BW)/A1S64TCRT(BW)-S1 monitoring.....	6 - 72
6.5.31	Q68ADV/Q68ADI/Q64AD module monitoring	6 - 74
6.5.32	Q62DA/Q64DA module monitoring.....	6 - 75
6.5.33	QD62D/QD62E/QD62 module monitoring	6 - 76
6.5.34	QD75P/QD75D module monitoring	6 - 77
6.5.35	QD75M module monitoring.....	6 - 87
6.5.36	QD75MH module monitoring	6 - 100
6.6	Operating I/O Module Monitor Screen	6 - 113
6.6.1	Specifying the module to be monitored	6 - 113
6.6.2	Monitor screen configuration and key functions	6 - 114
6.7	Error Messages and Corrective Action	6 - 115

7. NETWORK MONITOR 7 - 1 to 7 - 30

7.1	Features	7 - 1
7.2	Specifications	7 - 3
7.2.1	System configuration	7 - 3
7.2.2	Network information that can be monitored	7 - 5
7.2.3	Access range	7 - 7
7.2.4	Precautions.....	7 - 7
7.3	Display	7 - 9
7.4	Operation Procedures	7 - 12
7.4.1	Line monitor	7 - 12
7.4.2	Detailed monitor.....	7 - 15
7.4.3	Other station monitor	7 - 23
7.4.4	Other station communication status monitor	7 - 24
7.4.5	Other station data link status monitor	7 - 25
7.4.6	Other station parameter status monitor	7 - 26
7.4.7	Other station CPU operation status monitor	7 - 27
7.4.8	Other station CPU RUN status monitor	7 - 28
7.4.9	Other station loop status monitor.....	7 - 29
7.5	Error Message and Corrective Action	7 - 30

8. Q MOTION MONITOR 8 - 1 to 8 - 26

8.1	Features	8 - 1
8.2	Specifications	8 - 3
8.2.1	System configuration	8 - 3
8.2.2	Access range	8 - 5
8.2.3	Precautions.....	8 - 5
8.3	Display	8 - 6
8.4	Operation Procedures	8 - 9
8.4.1	System configuration screen layout.....	8 - 9
8.4.2	Monitor Menu screen	8 - 10
8.4.3	Present Value Monitor screen	8 - 11

8.4.4	SFC Error History screen	8 - 12
8.4.5	Error List screen	8 - 13
8.4.6	Error List Designated-Axis screen	8 - 15
8.4.7	Positioning Monitor screen	8 - 17
8.4.8	Servo Monitor screen	8 - 19
8.4.9	Present Value History Monitor screen	8 - 20
8.4.10	Parameter setting screen	8 - 22
8.4.11	Hard copy output	8 - 25
8.5	Error Messages and Corrective Action	8 - 26

9. SERVO AMPLIFIER MONITOR **9 - 1 to 9 - 44**

9.1	Features	9 - 1
9.2	Specifications	9 - 3
9.2.1	System configuration	9 - 3
9.2.2	Access range	9 - 11
9.2.3	Precautions.....	9 - 11
9.3	Display	9 - 12
9.4	Operations of Servo Amplifier Monitor Screens	9 - 15
9.4.1	Servo amplifier monitor.....	9 - 15
9.4.2	Setup	9 - 16
9.4.3	Monitor functions	9 - 17
9.4.4	Alarm function.....	9 - 19
9.4.5	Diagnostics function	9 - 22
9.4.6	Parameter setting	9 - 29
9.4.7	Test operations.....	9 - 35
9.4.8	Hard copy output	9 - 43
9.5	Error Messages and Corrective Action	9 - 44

10. CNC MONITOR FUNCTIONS **10 - 1 to 10 - 10**

10.1	Features	10 - 1
10.2	Specifications	10 - 2
10.2.1	System configuration	10 - 2
10.2.2	Access range	10 - 5
10.2.3	Precautions.....	10 - 5
10.3	Display	10 - 6
10.4	Operation Procedures	10 - 8
10.5	Error Messages and Corrective Action	10 - 10

11. BACKUP/RESTORE **11 - 1 to 11 - 36**

11.1	Features	11 - 1
11.2	Specifications	11 - 3
11.2.1	System configuration	11 - 3
11.2.2	Access range	11 - 9
11.2.3	Precautions.....	11 - 9
11.3	Display Operation	11 - 11
11.3.1	Outline before starting	11 - 11
11.3.2	Setting storage location for backup data	11 - 13
11.3.3	Security and password	11 - 14
11.3.4	Trigger backup.....	11 - 19

11.4	Operation Procedures	11 - 26
11.4.1	Main menu	11 - 26
11.4.2	Progress screen (backup).....	11 - 27
11.4.3	Data list (restoration)	11 - 28
11.4.4	Progress screen (restoration)	11 - 29
11.5	Backup Data Conversion Tool	11 - 30
11.5.1	Operating environment	11 - 30
11.5.2	How to install and start Backup Data Conversion Tool.....	11 - 31
11.5.3	How to use Backup Data Conversion Tool	11 - 32
11.6	Errors and Corrective Actions	11 - 35
12.	CNC DATA I/O	12 - 1 to 12 - 10
12.1	Features	12 - 1
12.2	Specifications	12 - 2
12.2.1	System configuration	12 - 2
12.2.2	Access range	12 - 3
12.2.3	Precautions	12 - 3
12.3	Display	12 - 5
12.4	Operation Procedures	12 - 7
12.5	Error Messages and Corrective Actions	12 - 9
13.	SFC MONITOR	13 - 1 to 13 - 42
13.1	Features	13 - 1
13.2	Specifications	13 - 4
13.2.1	System configuration	13 - 4
13.2.2	Devices and range that can be monitored	13 - 7
13.2.3	Access range	13 - 8
13.2.4	Precautions	13 - 8
13.3	Display Operation	13 - 9
13.3.1	Outline before starting	13 - 9
13.3.2	Setting SFC data storage location	13 - 12
13.3.3	Reading comment files from CF card	13 - 13
13.4	Setting Display Format	13 - 15
13.4.1	Switching languages of SFC programs	13 - 15
13.4.2	Setting display mode of SFC programs	13 - 15
13.4.3	Setting zoom comment display mode.....	13 - 15
13.4.4	Switching display formats between decimal and hexadecimal numbers	13 - 15
13.4.5	Setting automatic scroll mode.....	13 - 16
13.5	How to Operate PLC Read Screen	13 - 17
13.5.1	Displayed contents	13 - 17
13.5.2	Key functions	13 - 20
13.6	How to Operate Block List Screen	13 - 23
13.6.1	Displayed contents	13 - 23
13.6.2	Key functions	13 - 24
13.6.3	Menus	13 - 24
13.7	How to Operate SFC Diagram Monitor Screen	13 - 25
13.7.1	Displayed contents	13 - 25
13.7.2	Key functions	13 - 28
13.7.3	Menus	13 - 29

13.8	Test Operation	13 - 38
13.9	Error Messages and Corrective Action	13 - 41

APPENDICES	App - 1 to App - 34
Appendix1 List of Functions Added by GT Designer2 Version Upgrade (For GOT1000 Series)	App - 1
Appendix.1.1GT16, GT15, GT SoftGOT1000 and GT11	App - 1
Appendix.1.2For GT10.....	App - 31
INDEX	Index - 1 to Index - 8

About Manuals

The following manuals are also related to this product.

If necessary, order them by quoting the details in the tables below.

The manual in PDF-format is included in the GT Works2 and GT Designer2 products.

Related Manuals

Manual Name	Manual Number (Model Code)
GT16 User's Manual -Describes the GT16 hardware-relevant contents, including the specifications, part names, mounting, power supply wiring, external dimensions, and option devices. -Describes the GT16 functions, including the utility. (Sold separately)	SH-080778ENG (1D7M88)
GT15 User's Manual -Describes the GT15 hardware-relevant contents, including the specifications, part names, mounting, power supply wiring, external dimensions, and option devices. -Describes the GT15 functions, including the utility. (Sold separately)	SH-080528ENG (1D7M23)
GT11 User's Manual -Describes the GT11 hardware-relevant contents, including the specifications, part names, mounting, power supply wiring, external dimensions, and option devices. -Describes the GT11 functions, including the utility. (Sold separately)	JY997D17501A (09R815)
Handy GOT User's Manual -Describes the Handy GOT hardware-relevant contents, including the system configurations, specifications, part names, mounting, power supply wiring, external dimensions, and option devices. -Describes the Handy GOT functions, including the utility, and how to make cables. (Sold separately)	JY997D20101B (09R817)
GT10 User's Manual -Describes the GT10 hardware-relevant contents, including the specifications, part names, mounting, power supply wiring, external dimensions, and option devices. -Describes the GT10 functions, including the utility. (Sold separately)	JY997D24701 (09R819)
GT SoftGOT1000 Version2 Operating Manual Describes the screen configuration, functions and using method of GT SoftGOT1000. (Sold separately)	SH-080602ENG (1D7M48)
GT Designer2 Version2 Basic Operation/Data Transfer Manual (For GOT1000 Series) Describes methods of the GT Designer2 installation operation, basic operation for drawing and transmitting data to GOT1000 series (Sold separately)	SH-080529ENG (1D7M24)
GT Designer2 Version2 Screen Design Manual (For GOT1000 Series) (1/3, 2/3, 3/3) Describes specifications and settings of each object function applicable to GOT1000 series. (Sold separately)	SH-080530ENG (1D7M25)
GOT1000 Series Connection Manual (1/3, 2/3, 3/3) Describes system configurations of the connection method applicable to GOT1000 series and cable creation (Sold separately)	SH-080532ENG (1D7M26)

(Continued to next page)

Manual Name	Manual Number (Model Code)
GOT1000 Series Gateway Functions Manual Describes specifications, system configurations and setting method of the gateway function. (Sold separately)	SH-080545ENG (1D7M33)
GOT1000 Series MES Interface Function Manual Describes the specifications, system configurations, and setting method of GT MES interface function. (Sold separately)	SH-080654ENG (1D7M63)

ABBREVIATIONS AND GENERIC TERMS

Abbreviations and generic terms used in this manual are as follows:

■ GOT

Abbreviations and generic terms			Description
GOT1000 Series	GT SoftGOT1000		Abbreviation of GT SoftGOT1000
	GT1695	GT1695M-X	Abbreviation of GT1695M-XTBA, GT1695M-XTBD
	GT1685	GT1685M-S	Abbreviation of GT1685M-STBA, GT1685M-STBD
	GT16□□, GT16		Abbreviation of GT1695, GT1685
	GT1595	GT1595-X	Abbreviation of GT1595-XTBA, GT1595-XTBD
	GT1585	GT1585V-S	Abbreviation of GT1585V-STBA, GT1585V-STBD
		GT1585-S	Abbreviation of GT1585-STBA, GT1585-STBD
	GT157□	GT1575V-S	Abbreviation of GT1575V-STBA, GT1575V-STBD
		GT1575-S	Abbreviation of GT1575-STBA, GT1575-STBD
		GT1575-V	Abbreviation of GT1575-VTBA, GT1575-VTBD
		GT1575-VN	Abbreviation of GT1575-VNBA, GT1575-VNBD
		GT1572-VN	Abbreviation of GT1572-VNBA, GT1572-VNBD
	GT156□	GT1565-V	Abbreviation of GT1565-VTBA, GT1565-VTBD
		GT1562-VN	Abbreviation of GT1562-VNBA, GT1562-VNBD
	GT155□	GT1555-V	Abbreviation of GT1555-VTBD
		GT1555-Q	Abbreviation of GT1555-QTBD, GT1555-QSBD
		GT1550-Q	Abbreviation of GT1550-QLBD
	GT15□□, GT15		Abbreviation of GT1595, GT1585, GT157□, GT156□, GT155□
	GT115□	GT1155-Q	Abbreviation of GT1155-QTBDQ, GT1155-QSBDQ, GT1155-QTBDA, GT1155-QSBDA, GT1155-QTBD, GT1155-QSBD
		GT1150-Q	Abbreviation of GT1150-QLBDQ, GT1150-QLBDA, GT1150-QLBD
	Handy GOT	GT1155HS-Q	Abbreviation of GT1155HS-QSBD
		GT1150HS-Q	Abbreviation of GT1150HS-QLBD
	GT11□□, GT11		Abbreviation of GT115□, GT11 Handy GOT
	GT105□	GT1055-Q	Abbreviation of GT1055-QSBD
		GT1050-Q	Abbreviation of GT1050-QBBD
	GT1030		Abbreviation of GT1030-LBD, GT1030-LBD2, GT1030-LBDW, GT1030-LBDW2
	GT1020		Abbreviation of GT1020-LBD, GT1020-LBD2, GT1020-LBL, GT1020-LBDW, GT1020-LBDW2, GT1020-LBLW
	GT10□□, GT10		Abbreviation of GT105□, GT1030, GT1020
GOT900 Series			Abbreviation of GOT-A900 series, GOT-F900 series
GOT800 Series			Abbreviation of GOT-800 series

■ Communication unit

Abbreviations and generic terms	Description			
Bus connection unit	GT15-QBUS, GT15-75QBUSL,	GT15-QBUS2, GT15-75QBUS2L,	GT15-ABUS, GT15-75ABUSL,	GT15-ABUS2, GT15-75ABUS2L
Serial communication unit	GT15-RS2-9P,	GT15-RS4-9S,	GT15-RS4-TE	
RS-422 conversion unit	GT15-RS2T4-9P,	GT15-RS2T4-25P		
Ethernet communication unit	GT15-J71E71-100			
MELSECNET/H communication unit	GT15-J71LP23-25,	GT15-J71BR13		
MELSECNET/10 communication unit	GT15-75J71LP23-Z ^{*1} , GT15-75J71BR13-Z ^{*2}			
CC-Link IE controller network communication unit	GT15-J71GP23-SX			
CC-Link communication unit	GT15-J61BT13,	GT15-75J61BT13-Z ^{*3}		
Interface converter unit	GT15-75IF900			

*1 A9GT-QJ71LP23 + GT15-75IF900 set

*2 A9GT-QJ71BR13 + GT15-75IF900 set

*3 A8GT-J61BT13 + GT15-75IF900 set

■ Option unit

Abbreviations and generic terms		Description	
Printer unit		GT15-PRN	
Video/RGB unit	Video input unit	GT16M-V4,	GT15V-75V4
	RGB input unit	GT16M-R2,	GT15V-75R1
	Video/RGB input unit	GT16M-V4R1,	GT15V-75V4R1
	RGB output unit	GT16M-ROUT,	GT15V-75ROUT
Multimedia unit		GT16M-MMR	
CF card unit		GT15-CFCD	
CF card extension unit ^{*1}		GT15-CFEX-C08SET	
External I/O unit		GT15-DIO,	GT15-DIOR
Sound output unit		GT15-SOUT	

*1 GT15-CFEX + GT15-CFEXIF + GT15-C08CF set.

■ Option

Abbreviations and generic terms		Description			
Memory card	CF card	GT05-MEM-16MC, GT05-MEM-256MC	GT05-MEM-32MC,	GT05-MEM-64MC,	GT05-MEM-128MC,
Memory card adaptor		GT05-MEM-ADPC			
Option function board		GT16-MESB, GT15-QFNB32M,	GT15-FNB, GT15-QFNB48M,	GT15-QFNB, GT15-MESB48M,	GT15-QFNB16M, GT11-50FNB
Battery		GT15-BAT,	GT11-50BAT		
Protective Sheet		GT16-90PSCB,	GT16-90PSGB,	GT16-90PSCW,	GT16-90PSGW,
		GT16-80PSCB,	GT16-80PSGB,	GT16-80PSCW,	GT16-80PSGW,
		GT15-90PSCB,	GT15-90PSGB,	GT15-90PSCW,	GT15-90PSGW,
		GT15-80PSCB,	GT15-80PSGB,	GT15-80PSCW,	GT15-80PSGW,
		GT15-70PSCB,	GT15-70PSGB,	GT15-70PSCW,	GT15-70PSGW,
		GT15-60PSCB,	GT15-60PSGB,	GT15-60PSCW,	GT15-60PSGW,
		GT15-50PSCB,	GT15-50PSGB,	GT15-50PSCW,	GT15-50PSGW,
		GT11-50PSCB,	GT11-50PSGB,	GT11-50PSCW,	GT11-50PSGW,
		GT11H-50PSC,			
		GT10-50PSCB,	GT10-50PSGB,	GT10-50PSCW,	GT10-50PSGW,
		GT10-30PSCB,	GT10-30PSGB,	GT10-30PSCW,	GT10-30PSGW,
		GT10-20PSCB,	GT10-20PSGB,	GT10-20PSCW,	GT10-20PSGW
Protective cover for oil		GT05-90PCO, GT05-50PCO	GT05-80PCO,	GT05-70PCO,	GT05-60PCO,
USB environmental protection cover		GT16-UCOV,	GT15-UCOV,	GT11-50UCOV	
Stand		GT15-90STAND, GT05-50STAND	GT15-80STAND,	GT15-70STAND,	A9GT-50STAND,
Attachment		GT15-70ATT-98, GT15-60ATT-87,	GT15-70ATT-87, GT15-60ATT-77,	GT15-60ATT-97, GT15-50ATT-95W,	GT15-60ATT-96, GT15-50ATT-85
Backlight		GT16-90XLTT, GT15-70SLTT, GT15-60VLTN	GT16-80SLTT, GT15-70VLTT,	GT15-90XLTT, GT15-70VLTN,	GT15-80SLTT, GT15-60VLTT,
Multi-color display board		GT15-XHNB,	GT15-VHNB		
Connector conversion box		GT11H-CNB-37S			
Emergency stop sw guard cover		GT11H-50ESCOV			
Memory loader		GT10-LDR			
Memory board		GT10-50FMB			

■ Software

Abbreviations and generic terms	Description
GT Works2 Version□	SW□D5C-GTWK2-E, SW□D5C-GTWK2-EV
GT Designer2 Version□	SW□D5C-GTD2-E, SW□D5C-GTD2-EV
GT Designer2	Abbreviation of screen drawing software GT Designer2 for GOT1000/GOT900 series
GT Converter2	Abbreviation of data conversion software GT Converter2 for GOT1000/GOT900 series
GT Simulator2	Abbreviation of screen simulator GT Simulator 2 for GOT1000 / GOT900 series
GT SoftGOT1000	Abbreviation of monitoring software GT SoftGOT1000
GT SoftGOT2	Abbreviation of monitoring software GT SoftGOT2
GX Developer	Abbreviation of SW□D5C-GPPW-E(-EV)/SW□D5F-GPPW-E type software package
GX Simulator	Abbreviation of SW□D5C-LLT-E(-EV) type ladder logic test tool function software packages (SW5D5C-LLT (-EV) or later versions)
Document Converter	Abbreviation of document data conversion software Document Converter for GOT1000 series
PX Developer	Abbreviation of SW□D5C-FBDQ-E type FBD software package for process control

■ License key (for GT SoftGOT1000)

Abbreviations and generic terms	Description
License	GT15-SGTKEY-U, GT15-SGTKEY-P

■ License key (for GT SoftGOT2)

Abbreviations and generic terms	Description
License key	A9GTSOFT-LKEY-P (For DOS/V PC)
License key FD	SW5D5F-SGLKEY-J (For PC CPU module)

■ Others

Abbreviations and generic terms		Description
OMRON PLC		Abbreviation of PLC manufactured by OMRON Corporation
KEYENCE PLC		Abbreviation of PLC manufactured by KEYENCE CORPORATION
KOYO EI PLC		Abbreviation of PLC manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
SHARP PLC		Abbreviation of PLC manufactured by Sharp Corporation
JTEKT PLC		Abbreviation of PLC manufactured by JTEKT Corporation
TOSHIBA PLC		Abbreviation of PLC manufactured by TOSHIBA CORPORATION
TOSHIBA MACHINE PLC		Abbreviation of PLC manufactured by TOSHIBA MACHINE CO., LTD.
HITACHI IES PLC		Abbreviation of PLC manufactured by Hitachi Industrial Equipment Systems Co., Ltd.
HITACHI PLC		Abbreviation of PLC manufactured by Hitachi, Ltd.
FUJI FA PLC		Abbreviation of PLC manufactured by Fuji Electric FA Components & Systems Co., Ltd.
MATSUSHITA PLC		Abbreviation of PLC manufactured by Matsushita Electric Works, Ltd.
YASKAWA PLC		Abbreviation of PLC manufactured by YASKAWA Electric Corporation
YOKOGAWA PLC		Abbreviation of PLC manufactured by Yokogawa Electric Corporation
ALLEN-BRADLEY PLC		Abbreviation of Allen-Bradley PLC manufactured by Rockwell Automation, Inc.
GE FANUC PLC		Abbreviation of PLC manufactured by GE Fanuc Automation Corporation
LS IS PLC		Abbreviation of PLC manufactured by LS Industrial Systems Co., Ltd.
SCHNEIDER PLC		Abbreviation of PLC manufactured by Schneider Electric SA
SIEMENS PLC		Abbreviation of PLC manufactured by Siemens AG
Temperature controller	OMRON temperature controller	Abbreviation of temperature controller manufactured by OMRON Corporation
	SHINKO indicating controller	Abbreviation of temperature controller manufactured by Shinko Technos Co., Ltd.
	CHINO controller	Abbreviation of temperature controller manufactured by CHINO CORPORATION
	FUJI SYS temperature controller	Abbreviation of temperature controller manufactured by Fuji Electric Systems Co., Ltd.
	YAMATAKE temperature controller	Abbreviation of temperature controller manufactured by Yamatake Corporation
	YOKOGAWA temperature controller	Abbreviation of temperature controller manufactured by Yokogawa Electric Corporation
	RKC temperature controller	Abbreviation of temperature controller manufactured by RKC INSTRUMENT INC.
PC CPU module		Abbreviation of PC CPU Unit manufactured by CONTEC CO., LTD
GOT (server)		Abbreviation of GOTs that use the server function
GOT (client)		Abbreviation of GOTs that use the client function
Windows® font		Abbreviation of TrueType font and OpenType font available for Windows® (Differs from the True Type fonts settable with GT Designer2)
Intelligent function module		Indicates the modules other than the PLC CPU, power supply module and I/O module that are mounted to the base unit.
MODBUS® /TCP		Generic term for the protocol designed to use MODBUS® protocol messages on a TCP/IP network.

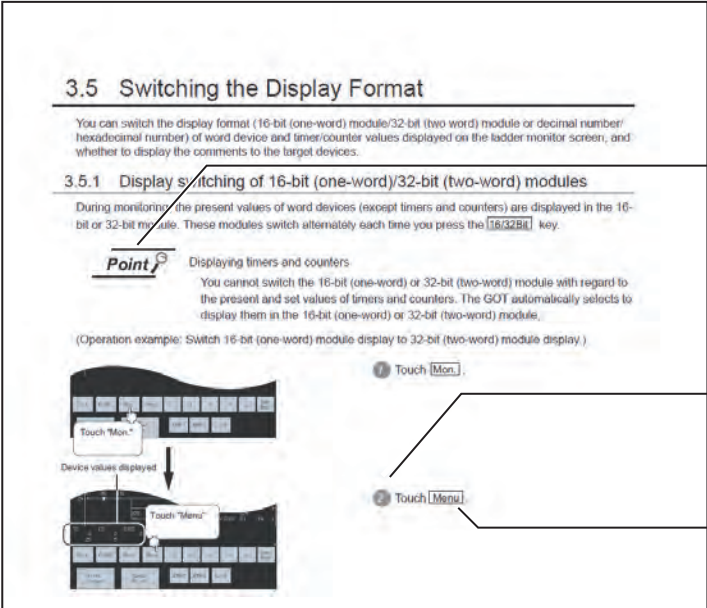
How to read this manual

1 Functions

This manual describes functions available for GT Designer2 Version2.90U.
For the added functions by the product version upgrade, refer to the list of functions added by GT Designer2 version upgrade in Appendices.

2 Symbols

Following symbols are used in this manual.



Point Refers to the information required.

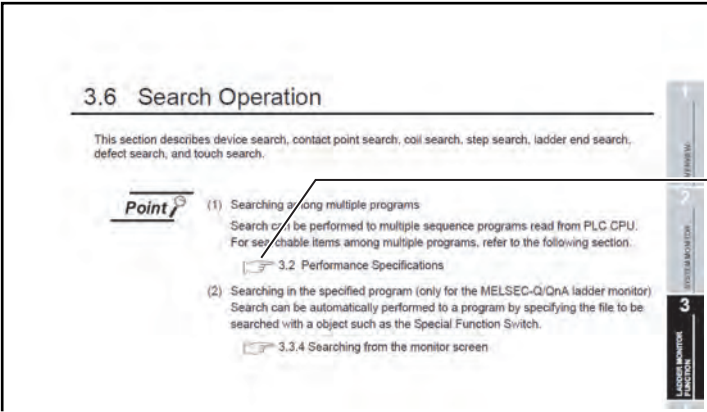
Remark Refers to the supplementary explanations for reference.

1 → 2 → 3 ...
Indicates the operation steps.

Menu and items are differentiated with parentheses.

[] :Refers to an item displayed on the computer screen or the GOT screen.

[] :Refers to a button displayed on the computer screen or the GOT screen, or a key of the computer keyboard.



Show the items including detailed explanation (manual and the chapter, section, item).

1. OVERVIEW

This manual describes the following functions available on a GOT system in which the standard monitor OS, an Extended function OS, an Option OS, and the Communication driver are installed.

- System monitor
- Ladder monitor
- A list editor
- FX list editor
- Intelligent module monitor
- Network monitor
- Q motion monitor
- Servo amplifier monitor
- CNC monitor
- Backup/restore
- CNC data I/O
- SFC monitor

The monitor functions explained herein are intended to troubleshoot the PLC system and to streamline maintenance operations.



(1) Precautions for using each function

Some functions are not available depending on the GOT used, target CPU or connection form.

For option function boards, functions available on each GOT, and restrictions on each target CPU and connection form, see the appropriate chapter.

(2) Display examples in this manual

In this manual, with a few special exceptions, explanations are given primarily using the GTI575-V screens.

1.1 Before Using Each Function

1.1.1 Each function and related manuals

The difference between the extended and option functions of the GOT is shown below.

- Extended functions: Functions available by installing an Extended function OS.
- Option functions: Functions available by connecting an option function board (including a board with add-on memory).
Many of the option functions require an Option OS to be installed.

For a description of each function, see the appropriate manual listed below.

1 Manuals describing functions and how to set them

Category	Function name	Reference
Extended functions	Bar code	GT Designer 2 Version □ Screen Design Manual
	RFID	
	System monitor	Chapter 2
	Stroke font	GT Designer2 Version □ Screen Design Manual
	Video display	
	RGB display	
	Remote personal computer operation	
	Multimedia	
	Backup/restore	Chapter11
	CNC data I/O	Chapter12
	Operator authentication	GT Designer2 Version □ Screen Design Manual
	Sound output	
	External I/O/operation panel	
	Device data transfer	
	Maintenance timing setting	GT15 User's Manual
	Multi-channel	GT Designer 2 Version □ Screen Design Manual
	KANJI regions	
	Operation log	
	Document display	
	Kana-kanji conversion*1	
	Kana-kanji conversion (enhanced version)	
	Historical Trend Graph	
	Logging	
	Recipe	
	Advanced Recipe	
	Object Script	
	Ladder monitor	Chapter 3
	A list editor	Chapter 4
	FX list editor	Chapter 5
	Intelligent module monitor	Chapter 6
	Network monitor	Chapter 7
	Q motion monitor	Chapter 8

(Continued to next page)

Category	Function name	Reference
Option functions	Servo amplifier monitor	Chapter 9
	CNC monitor	Chapter 10
	SFC monitor	Chapter 13
	Gateway	GOT1000 Series Gateway Functions Manual
	MES interface	GOT1000 Series MES Interface Function Manual

2 Manuals describing how to connect an option function board

GOT	Reference manual
GT16	GT16 User's Manual
GT15	GT15 User's Manual
GT11	GT11 User's Manual

3 Manuals describing how to install each OS

OS	Reference manual
Extended function OS	GT Designer 2 Version □ Basic Operation/Data Transfer Manual
Option OS	

1

OVERVIEW

2

SYSTEM MONITOR

3

LADDER MONITOR
FUNCTION

4

MELSEC-A LIST EDITOR

5

MELSEC-FX LIST
EDITOR

6

INTELLIGENT MODULE
MONITOR

7


NETWORK MONITOR

8

Q MOTION MONITOR

1.1.2 Hardware and OS' required for each function

To use each function, extended function OS, or option OS and option function board is required.
For installing the extended function OS or option OS on the GOT, make sure that the user area of the specified drive has enough free space for the OS memory space shown on the next page.
For details of data transfer, refer to the following.

 GT Designer 2 Basic Operation/Data Transfer Manual
Subsection 8.1.2 Drive capacity required for data transfer


The following shows the option function boards applicable to each GOT.

GOT	Option function board
GT16	GT16-MESB
GT15	GT15-FNB, GT15-QFNB, GT15-QFNB16M, GT15-QFNB32M, GT15-QFNB48M, GT15-MESB48M
GT11	GT11-50FNB
GT10	Not required

An option function board (GT15-FNB or GT11-50FNB) is built in the following GOTs.

GOT	Model	Description
GT15 ^{*1}	All models	Function version D or later
GT11	GT1155-QTBDQ, GT1155-QTBDA, GT1155-QSBDQ, GT1155-QSBDA, GT1150-QLBDQ, GT1150-QLBDA	
	GT1155-QTBD	
	GT1155HS-QSBD, GT1150HS-QLBD	
	GT1155-QSBD, GT1150-QLBD	

^{*1} For using an option function board built in the GOT, the latest standard monitor OS must be installed on the GOT.
For OS versions, refer to the following.


 Appendix1 List of Functions Added by GT Designer2 Version Upgrade (For GOT1000 Series)

Option functions operated with the GT15-FNB or GT11-50FNB can be used without installing an additional option function board.

For using functions operated with the GT16-MESB, GT15-QFNB(□ M), or GT15-MESB48M, and for adding more memory to the GT15, install an applicable option function board.

An additional option function board can be installed on the GOT with a built-in option function board. (An option function board inapplicable to the GOT cannot be used. (An option function board for the GT11 cannot be installed on the GT15.))

For how to check function versions and hardware versions, refer to the following manuals.

 GT15 User's Manual
GT11 User's Manual
Handy GOT User's Manual

1 For GT16

○: Required (Either one) ×: Unusable

Function name	Extended function OS / option OS name	OS memory space (user area)*1		Option function board
		Built-in flash memory (ROM)	User memory (RAM)	GT16-MESB
Bar code	Bar code	84KB	84KB	Not required
RFID	RFID	166KB	166KB	Not required
System monitor	System monitor	746KB	746KB	Not required
Report	Report	150KB	235KB	Not required
Printer	Printer	522KB	1104KB	Not required
Stroke font*2	Stroke Font Support Data	400 KB	400 KB	Not required
	Stroke Standard Font(JPN)	2160KB	2160KB	Not required
	Stroke Standard Font(JPN)(supporting Hangul)	3175KB	3175KB	Not required
	Stroke Standard Font(China GB)	1474KB	1474KB	Not required
	Stroke Standard Font(China GB)(supporting Hangul)	2016KB	2016KB	Not required
Video display	Video/RGB	292KB	474KB	Not required
RGB display				
Multimedia	Multimedia	292KB	1074KB	Not required
Remote personal computer operation	Video/RGB	292KB	474KB	Not required
	PC Remote Operation	50KB	84KB	Not required
Backup/restore	Backup/Restore	420KB	766KB	Not required
Operator Authentication	Operator authentication	460KB	730KB	Not required
Sound Output	Sound Output	100KB	200KB	Not required
External I/O / Operation Panel	External I/O / Operation Panel	70KB	100KB	Not required
CNC data I/O	CNC Data I/O	210KB	383KB	Not required
	GOT Platform Library	77KB	200KB	Not required
Device data transfer	Device Data Transfer	50KB	100KB	Not required
Maintenance timing setting	Not required	-	-	Not required
Multi-channel	Not required	-	-	Not required
KANJI regions	Standard Font (China GB)	1280KB	1280KB	Not required
	Standard Font (China Big5)	1920KB	1920KB	Not required
	Standard Font (Japanese)	1280KB	1280KB	Not required
	Stroke Font (JPN)	1037KB	1037KB	Not required
	Stroke Font (China GB5)	1248KB	1248KB	Not required
	Stroke Font (China Big5)	1680KB	1680KB	Not required
Operation log	Operation Log	384KB	1221KB	Not required
	Device name converter	400KB	800KB	Not required
Document display	Document Display	150KB	3072KB	Not required
Kana-kanji conversion (enhanced version)	KANA KANJI(JPN) (Enhanced Version)	242KB	1274KB	Not required
Historical Trend Graph	Not required	-	-	Not required
Logging	Logging	380KB	710KB	Not required
Recipe	Recipe	70KB	100KB	Not required
Advanced Recipe	Advanced Recipe	310KB	1187KB	Not required

(Continued to next page)

○: Required ×: Unusable

Function name	Extended function OS / option OS name	OS memory space (user area)		Option function board
		Built-in flash memory (ROM)	User memory (RAM)	GT16-MESB
Object Script	Object Script	180KB	360KB	Not required
Ladder monitor	Ladder monitor for MELSEC-A	342KB	674KB	Not required
	Ladder monitor for MELSEC-FX	342KB	674KB	Not required
	Ladder monitor for MELSEC-Q/QnA	590KB	4170KB	Not required
A list editor	List editor for MELSEC-A	542KB	1024KB	Not required
FX list editor	List editor for MELSEC-FX	542KB	1024KB	Not required
Intelligent module monitor	Intelligent module monitor	390KB	770KB	Not required
Network monitor	Network monitor	210KB	370KB	Not required
Q motion monitor	Q motion monitor	390KB	770KB	Not required
Servo amplifier monitor	Servo amplifier monitor	390KB	770KB	Not required
CNC monitor	CNC monitor	390KB	770KB	Not required
SFC monitor	GOT Platform Library	77KB	200KB	Not required
	SFC monitor	608KB	1940KB	Not required
	GOT Function Expansion Library	4728KB	19381KB	Not required
Gateway	Gateway (Server, Client)	50KB	100KB	Not required
	Gateway (Mail)	50KB	100KB	Not required
	Gateway (FTP)	50KB	84KB	Not required
MES interface	MES Interface	1598KB	13461KB	○

*1 The OS memory space differs between the built-in flash memory (ROM) and the user memory (RAM).

When writing data, including the OS, communication drivers, and project data, from the built-in flash memory (ROM) to the user memory (RAM), the OS data size increases. Make sure that the total data size does not exceed the user memory (RAM) capacity.

*2 For using fonts, install option fonts if necessary.

For how to use fonts and the setting method, refer to the following manual.



GT Designer2 Version□ Screen Design Manual (2.3 Specifications of Applicable Characters)

2 For GT15

○: Required (Either one) ×: Unusable

Function name	Extended function OS / option OS name	OS memory space (user area)	Option function board		
			GT15-FNB	GT15-QFNB GT15-QFNB□M	GT15-MESB48M
Bar code	Bar code	84KB	Not required		
RFID	RFID	166KB	Not required		
System monitor	System monitor	746KB	Not required		
Report	Report	235KB	Not required		
Printer	Printer	1104KB	Not required		
Stroke font ^{*6}	Stroke Font Support Data	400 KB	Not required		
	Stroke Standard Font(JPN)	2160KB	Not required		
	Stroke Standard Font(JPN)(supporting Hangul)	3175KB	Not required		
	Stroke Standard Font(China GB)	1474KB	Not required		
	Stroke Standard Font(China GB)(supporting Hangul)	2016KB	Not required		
Video display ^{*2}	Video/RGB	512KB	Not required		
RGB display ^{*2}					
Remote personal computer operation ^{*2}	Video/RGB	512KB	Not required		
	PC Remote Operation	84KB	Not required		
Backup/restore	Backup/Restore	820KB	Not required		
Operator Authentication	Operator authentication	784KB	Not required		
Sound Output	Sound Output	200KB	Not required		
External I/O / Operation Panel	External I/O / Operation Panel	100KB	Not required		
CNC data I/O ^{*1}	CNC Data I/O	437KB	Not required		
	GOT Platform Library	100KB	Not required		
Device data transfer	Device Data Transfer	100KB	Not required		
Maintenance timing setting	Not required	-	○	○	○
Multi-channel	Not required	-	×	○	○
KANJI regions	Standard Font (China GB)	1280KB	○	○	○
	Standard Font (China Big5)	1920KB	○	○	○
	Standard Font (Japanese)	1280KB	○	○	○
	Stroke Font (JPN)	1037KB	○	○	○
	Stroke Font (China GB5)	1248KB	○	○	○
	Stroke Font (China Big5)	1680KB	○	○	○
Operation log	Operation Log	1218KB	○	○	○
	Device name converter	800KB	○	○	○
Document display	Document Display	2048KB	×	○	○
Kana-kanji conversion ^{*4}	KANA KANJI(JPN) ^{*4}	1223KB	○	○	○
Kana-kanji conversion (enhanced version) ^{*4}	KANA KANJI(JPN) (Enhanced Version) ^{*4}	1274KB	○	○	○
Historical Trend Graph	Not required	-	○	○	○
Logging	Logging	740KB	○	○	○
Recipe	Recipe	100KB	○	○	○
Advanced Recipe	Advanced Recipe	1241KB	○	○	○

(Continued to next page)

○: Required ×: Unusable

Function name	Extended function OS / option OS name	OS memory space (user area)	Option function board		
			GT15-FNB	GT15-QFNB GT15-QFNB□M	GT15-MESB48M
Object Script	Object Script	360KB	○	○	○
Ladder monitor ^{*3}	Ladder monitor for MELSEC-A	523KB	○	○	○
	Ladder monitor for MELSEC-FX	592KB	○	○	○
	Ladder monitor for MELSEC-Q/QnA	1082KB	×	○	○
A list editor	List editor for MELSEC-A	1058KB	○	○	○
FX list editor	List editor for MELSEC-FX	1058KB	○	○	○
Intelligent module monitor ^{*3}	Intelligent module monitor	384KB	○	○	○
Network monitor	Network monitor	324KB	○	○	○
Q motion monitor	Q motion monitor	607KB	○	○	○
Servo amplifier monitor	Servo amplifier monitor	524KB	○	○	○
CNC monitor ^{*1}	CNC monitor	588KB	○	○	○
SFC monitor ^{*3*7}	GOT Platform Library	100KB	Not required		
	SFC monitor	1373KB	×	○	○
	GOT Function Expansion Library	4728KB	×	○	○
Gateway	Gateway (Server, Client)	100KB	○	○	○
	Gateway (Mail)	100KB	○	○	○
	Gateway (FTP)	64KB	○	○	○
MES interface	MES Interface	3196KB	×	×	○ ^{*5}

*1 Applicable to the GT1595-X, GT1585V-S, GT1585-S, GT1575V-S, and GT1575-S only.

*2 Applicable to the GT1585V-S and GT1575V-S only.

*3 Inapplicable to the GT1555-Q and GT1550-Q.

*4 This function is dedicated to Japanese version.

*5 A capacity of 8218KB in the add-on memory (48MB) of the GT15-MESB48M is used for the MES interface function operation.

*6 For using fonts, install option fonts if necessary.

For how to use fonts and the setting method, refer to the following manual.

 GT Designer2 Version□ Screen Design Manual (2.3 Specifications of Applicable Characters)

*7 For using the SFC monitor function, a capacity of 6201KB or more is required in the user area of the specified drive for installing the extended function OS and option OS. (For using the GOT with the built-in flash memory of 5MB, set the OS boot drive to [A: Standard CF Card].)

For operating GOT Function Expansion Library (option OS), a capacity of 8192KB is required in the user area of the GOT memory. (A total memory capacity of 14393KB is required for using the SFC monitor function.)

Therefore, the following settings are required depending on the GOT to be used.

GOT	Required setting
GT1575-VN, GT1572-VN, GT1562-VN	<ul style="list-style-type: none"> Setting the OS boot drive to [A: Standard CF Card] Memory expansion (Installing an option function board with add-on memory)
Other than the above	<ul style="list-style-type: none"> Memory expansion (Installing an option function board with add-on memory)

For setting the OS boot drive, refer to the following.

 GT Designer2 Version□ Basic Operation/Data Transfer Manual (Chapter 8 TRANSFERRING DATA)

3 For GT11

○: Required - : Unusable

Function name	Extended function OS/ Option OS name	OS memory space (user area)	Option function board
			GT11-50FNB
Bar code	Bar code	0KB	Not required
RFID	RFID		Not required
System monitor	System monitor		Not required
Recipe	Recipe		○
A list editor ^{*1}	List editor for MELSEC-A		○
FX list editor ^{*2}	List editor for MELSEC-FX		○

*1 Inapplicable to the GT1155-QTBDQ, GT1155-QSBDQ, and GT1150-QLBDQ.

*2 Inapplicable to the GT1155-QTBDQ, GT1155-QTBDA, GT1155-QSBDQ, GT1155-QSBDA, GT1150-QLBDQ, and GT1150-QLBDA.

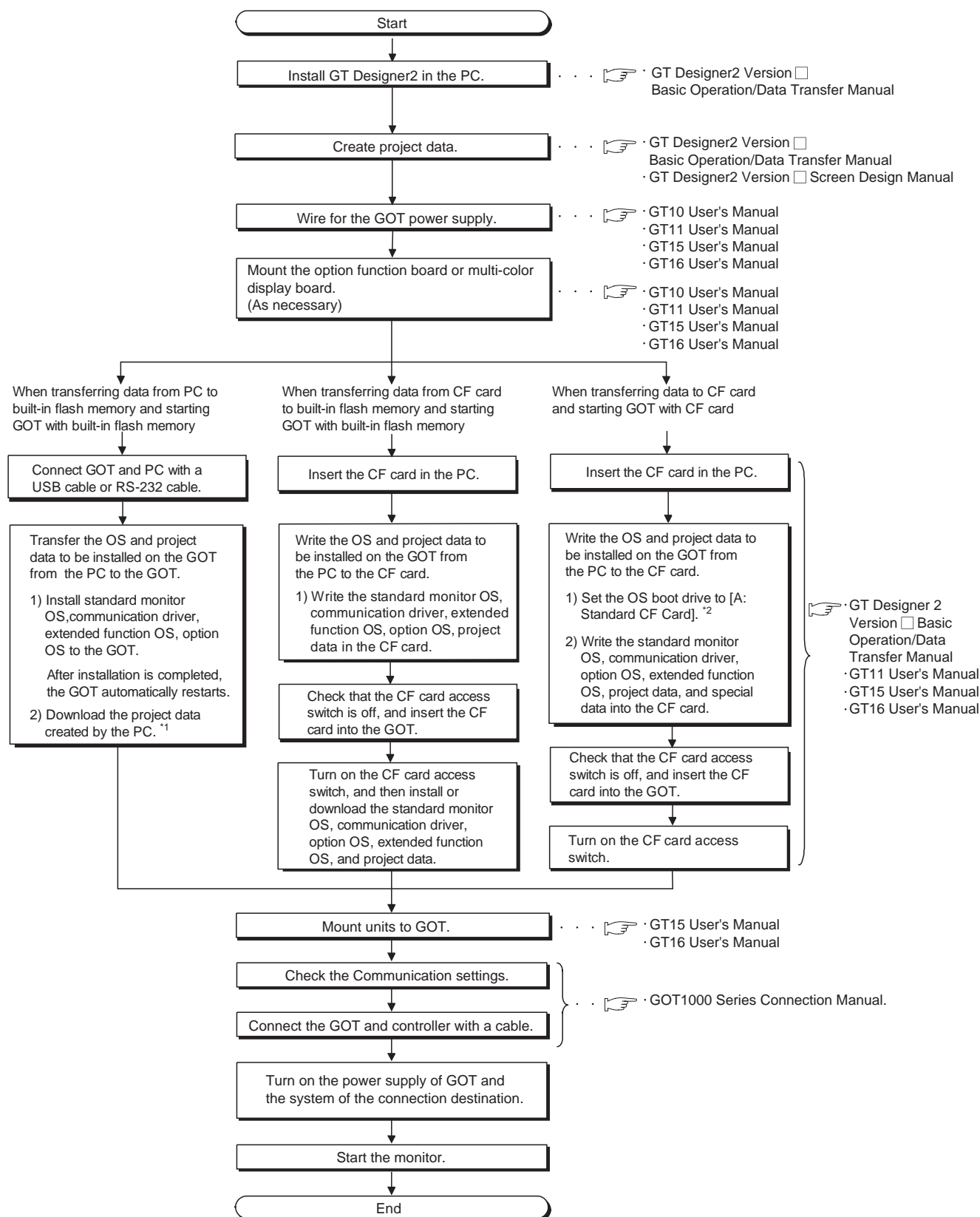
4 For GT10


Function name	Extended function OS/ Option OS name	OS memory capacity (user area)	Option function board
Bar code	Not required	-	Not required
Recipe	Not required	-	Not required
FX list editor ^{*1}	Not required	-	Not required

*1 Inapplicable to the GT1030 and GT1020.

1.1.3 Outline of procedure to the operation of each function

Before operating each function, download the required Extended function OS or Option OS into the GOT according to the procedure shown below, and connect required hardware to the GOT.



- * 1 Project data can be also downloaded/uploaded via Ethernet.
For download/upload of project data via Ethernet, BootOS and standard monitor OS should be installed in the GOT in advance so that the GOT and PC can communicate with each other via Ethernet by setting Communication Settings.
Refer to the following manual for details.
 GT Designer2 Version ☐ Basic Operation/Data Transfer Manual (Chapter 8 TRANSFERRING DATA)
- * 2 The B drive cannot be set as the OS boot drive.




Precautions for setting OS boot drive to [A: Standard CF Card]

- (1) GOT startup time
When the OS boot drive is set to [A: Standard CF Card], the GOT startup time with the A drive takes longer than that with the C drive.
The GOT startup time with the A drive differs depending on the CF card type, the numbers of extended function OSs and option OSs, and project data size.
- (2) Handling CF card during booting OS
Do not remove the CF card and do not turn off the CF card access switch during booting the OS.
Doing so causes the boot to fail. As a result, the GOT does not start correctly.
- (3) Corrective actions when OS cannot be booted
The OS cannot be booted in the following conditions.
Take the following corrective actions, and then boot the OS again.

Condition	Corrective action
The type of the GOT to be used differs from the GOT type data set with GT Designer2 stored in the CF card.	Select the same GOT type as the GOT to be used in the Communicate with Memory Card screen. Select OSs and project data to be downloaded, and then download the selected data to the CF card.
The OS boot drive has insufficient free space.	Mount an option function board with add-on memory on the GOT or delete unnecessary data.
The CF card access switch is off.	Turn on the CF card access switch.

1.1.4 Displayable languages for each function


Languages available for each function are shown in the following table.
For details of font data and displayable language, refer to the following.

 GT Designer2 Version□ Screen Design Manual (2.3.1 Fonts)

(○ : Displayed, × : Not displayed, Eng.: Displayed in English)

Function		Japanese	English	Chinese (Simplified)	Chinese (Traditional)	German	Korean
Utility function		○	○	○	○	○	○
System monitor		○	○	○	○	○	○
Backup/restore		○	○	○	○	○	○
Ladder monitor							
・ File name ・ Title ・ Comment ・ Note ・ Statement	Ladder monitor for MELSEC-A	○	○	×	×	×	×
	Ladder monitor for MELSEC-FX	○	○	×	×	×	×
	Ladder monitor for MELSEC-Q/QnA	○	○	×	×	×	○ ^{*1}
Other than the above	Ladder monitor for MELSEC-A ^{*3}	○	○	Eng.	Eng.	Eng.	Eng.
	Ladder monitor for MELSEC-FX	○	○	○	○	○	○
	Ladder monitor for MELSEC-Q/QnA	○	○	○	○	○	○
A list editor ^{*3}		○	○	Eng.	Eng.	Eng.	Eng.
FX list editor		○	○	○	○	○	○
Intelligent module monitor ^{*3}		○	○	Eng.	Eng.	Eng.	Eng.
Network monitor		○	○	○	○	○	○
Q motion monitor ^{*3}		○	○	Eng.	Eng.	Eng.	Eng.
Servo amplifier monitor ^{*3}		○	○	Eng.	Eng.	Eng.	Eng.
CNC monitor							
Monitor area		*2	*2	*2	*2	*2	*2
Other than the above		○	○	○	○	○	○
CNC data I/O		○	○	○	Eng.	Eng.	Eng.
SFC monitor		○	○	○	○	○	○

*1 For further information, see the following:

 Section 3.5.7 Language switching of the sequence program (MELSEC-Q/QnA ladder monitor)

- *2 The displayable language depends on the setting of the CNC side. (The language used on the monitor area is not linked to the language setting of [GOT setup].)
For the CNC settings, refer to the manual of CNC (C70, C6/C64) to be connected.
- *3 For displaying the system screen for the function in English, install the OS for the function on the GOT with the English version of GT Designer2.

2. SYSTEM MONITOR



2.1 Features

The system monitor function is capable of monitoring and changing the devices within a target controller. It is intended to troubleshoot the controller system and to streamline maintenance operations. By installing the system monitor, an extended function OS, from GT Designer 2 into the GOT, you can monitor and test the devices of the controller and the buffer memory of the intelligent function module.

1 Any device on four dedicated screens can be monitored.

The system monitor function comprises four monitors - entry monitor, batch monitor, TC monitor, and BM monitor, and you can monitor any device according to the application.

Entry monitor (On the GT15)

DEVICE MONITOR					TEST	MENU	FORM	SET
ChNo.[1]NetNo.[0]ST [FF]CPUNo.[0]								
D	15	-2147483645	DW					
Z	1	-32767						
X	1	●						
M	25	○						
W	200	100						
R	50	68378428	DW					
D	0	3	DW					
B	10	○						

The entry monitor function monitors up to 8 controller devices entered by the user in a single window.

(☞ Section 2.5 Entry Monitor)

Batch monitor (On the GT15)

BATCH MONITOR					TEST	MENU	FORM	SET
ChNo.[1]NetNo.[0]ST [FF]CPUNo.[0]								
D	10	32767	D	18	-500			
D	11	0	D	19	3234			
D	12	0	D	20	0			
D	13	-1	D	21	0			
D	14	0	D	22	0			
D	15	3	D	23	-32768			
D	16	3256	D	24	0			
D	17	0	D	25	0			

The batch monitor function monitors up to 16 controller devices from the device number specified by the user in a single window.

(☞ Section 2.6 Batch Monitor)

TC monitor (On the GT15)

TC MONITOR					TEST	MENU	FORM	SET
ChNo.[1]NetNo.[0]ST [FF]CPUNo.[0]								
FILE NAME[MAIN .QPG]								
T	0	PV	0	SV	25	↑↓	○	▲
[Operation start]								
T	1	PV	30	SV	30	↑↓	●	▲
[Products Line A]								
T	2	PV	0	SV		↑↓	○	▲
[Products Line B]								
T	3	PV	0	SV		↑↓	○	▲
[Products Line C]								

The TC monitor function monitors the present value, set value, contact point, and coil of up to 8 controller timers (T)/counters (C) from the device number specified by the user in a single window.

(☞ Section 2.7 TC Monitor (Monitoring Timers and Counters))

BM monitor (monitoring Buffer memory) (On the GT15)

BM MONITOR					TEST	MENU	FORM	SET
ChNo.[1]NetNo.[0]ST [FF]CPUNo.[0]								
I/O NO[0]								
BM	1	0	BM	9	0			
BM	2	0	BM	10	0			
BM	3	0	BM	11	0			
BM	4	0	BM	12	0			
BM	5	0	BM	13	0			
BM	6	0	BM	14	0			
BM	7	0	BM	15	0			
BM	8	0	BM	16	0			

The BM monitor function monitors up to 16 devices from the initial device number in the buffer memory of the intelligent function module specified by the user in a single window.

(☞ Section 2.8 BM Monitor (Monitoring Buffer Memory))

(1) Displaying the system monitor screen of the GT16 or GT15

Display methods differ depending on the GOT.

For the GOT with VGA or higher resolution, the monitor screen is divided into four windows. The GOT can simultaneously display four different kinds of monitor screens.

For the GT1555-VTBD, the monitor screen can be switched between the full and quad modes with the button for switching the number of monitor screens.

For the GOT with QVGA resolution, the GOT can display one of the four monitor screens as a full screen.

DEVICE MONITOR	TEST	MENU	FORM	SET
ChNo. [1] NetNo. [0] ST [FF] CPUNo. [0]				
D 15 213385219 DW				
Z 1 -32767				
X 1 ○				
M 25 ○				
W 200 43				
R 50 68378428 DW				
D 0 3 DW				
B 10 ○				

BATCH MONITOR	TEST	MENU	FORM	SET
ChNo. [1] NetNo. [0] ST [FF] CPUNo. [0]				
D 10 32767 D 18 -500				
D 11 0 D 19 3234				
D 12 0 D 20 0				
D 13 -1 D 21 0				
D 14 0 D 22 0				
D 15 3 D 23 -32768				
D 16 3256 D 24 0				
D 17 0 D 25 0				

TC MONITOR	TEST	MENU	FORM	SET
ChNo. [1] NetNo. [0] ST [FF] CPUNo. [0]				
FILE NAME [MAIN .OPG]				
T 0 PV 0 SV 25 1F 1F				
[Operation start]				
T 1 PV 0 SV 30 1F 1F				
[Products Line A]				
T 2 PV 0 SV 1F 1F				
[Products Line B]				
T 3 PV 0 SV 1F 1F				
[Products Line C]				

BM MONITOR	TEST	MENU	FORM	SET
ChNo. [1] NetNo. [0] ST [FF] CPUNo. [0]				
I/O NO [0]				
BM 1 0 BM 9 0				
BM 2 0 BM 10 0				
BM 3 0 BM 11 0				
BM 4 0 BM 12 0				
BM 5 0 BM 13 0				
BM 6 0 BM 14 0				
BM 7 0 BM 15 0				
BM 8 0 BM 16 0				

(GOT with VGA or higher resolution)

DEVICE MONITOR	TEST	MENU	FORM	SET
ChNo. [1] NetNo. [0] ST [FF] CPUNo. [0]				
D 0 1556				
X 0				
M 0				
Y 0				
SM 412				
W 0				
D 200 4901				
D 0 -12600				
X 1F				

(GOT with QVGA resolution)

• For GT1555-VTBD

(a) Full mode

When starting the system monitor, the GOT displays the monitor screen in the full mode.

The GOT displays one of the four monitor screens.

The screen display size differs depending on the monitor screen to be displayed.*1

(b) Quad mode

With the button for switching the number of monitor screens, the monitor screen is divided into four windows. The GOT can simultaneously display the four kinds of monitor screens.

DEVICE MONITOR	TEST	MENU	FORM	SET
ChNo. [1] NetNo. [0] ST [FF] CPUNo. [0]				
D 15 -2147483645 DW				
Z 1 -32767				
X 1 ○				
M 25 ○				
W 200 100				
R 50 68378428 DW				
D 0 3122				
B 8 ○				

(Full mode)

DEVICE MONITOR	TEST	MENU	FORM	SET
ChNo. [1] NetNo. [0] ST [FF] CPUNo. [0]				
D 15 -2147483645 DW				
Z 1 -32767				
X 1 ○				
M 25 ○				
W 200 100				
R 50 68378428 DW				
D 0 -17776				
B 8 ○				

TC MONITOR	TEST	MENU	FORM	SET
ChNo. [1] NetNo. [0] ST [FF] CPUNo. [0]				
FILE NAME [MAIN .OPG]				
T 0 PV 0 SV 25 1F 1F				
[Operation start]				
T 1 PV 0 SV 30 1F 1F				
[Products Line A]				
T 2 PV 0 SV 1F 1F				
[Products Line B]				
T 3 PV 0 SV 1F 1F				
[Products Line C]				

BM MONITOR	TEST	MENU	FORM	SET
ChNo. [1] NetNo. [0] ST [FF] CPUNo. [0]				
I/O NO [0]				
BM 1 0 BM 9 0				
BM 2 0 BM 10 0				
BM 3 0 BM 11 0				
BM 4 0 BM 12 0				
BM 5 0 BM 13 0				
BM 6 0 BM 14 0				
BM 7 0 BM 15 0				
BM 8 0 BM 16 0				

(Quad mode)

*1 The monitor screen in the full mode is four times bigger than each monitor screen in the quad mode.

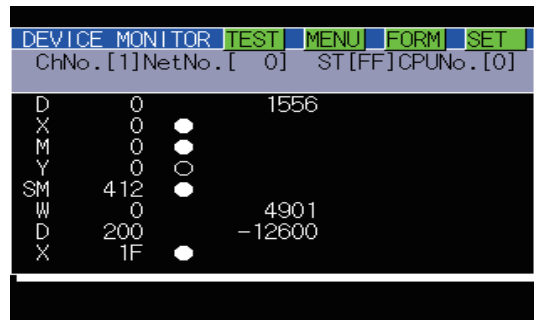
For displaying screens commonly used in the system, including the key window, the monitor screen size in the full mode is the same as each monitor screen size in the quad mode.

For details of switching the number of the monitor screens, refer to the following.



Section 2.3.1 Outline until starting the system monitor

- (2) Displaying the system monitor screen of the GT11
The GOT can display one of the four monitor screens as a full screen.

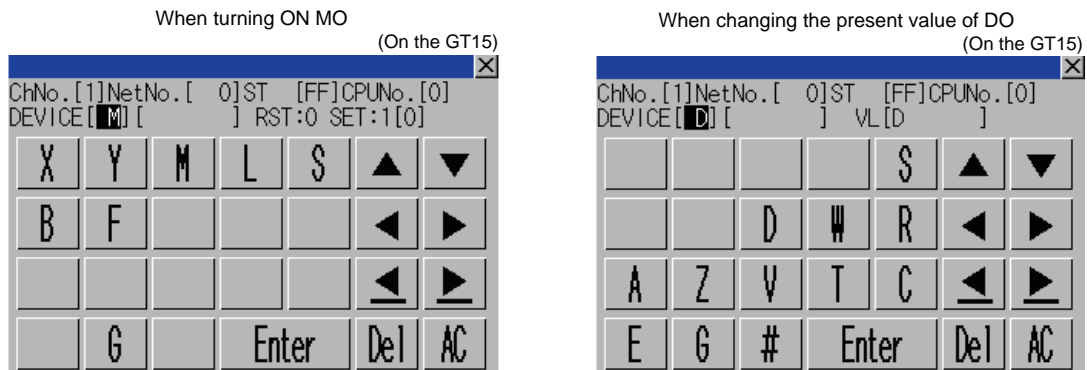


2 Data can be changed by test operation.

For further information, see the following:

☞ Section 2.9 Test Operation

(Test example)



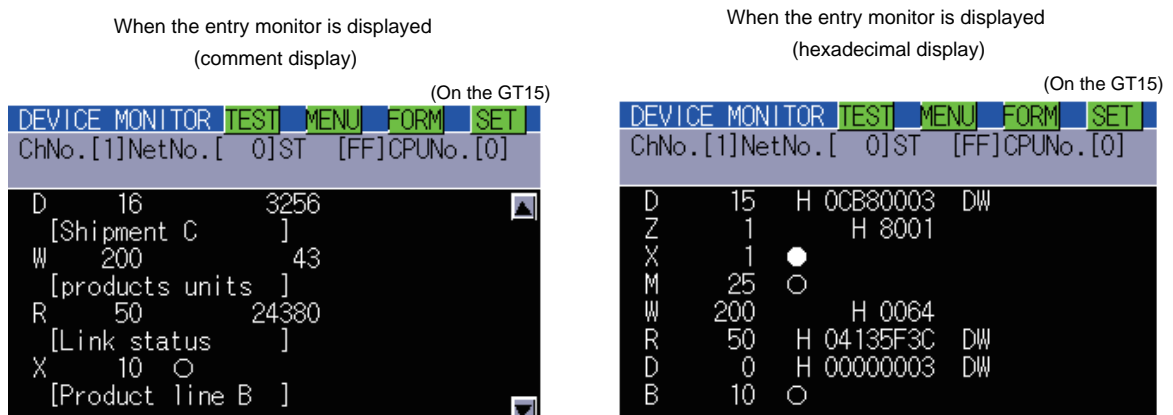
- (1) Testing a bit device
A device specified by the user is turned on and off.
- (2) Testing a word device
A specified value is written to a device specified by the user.
- (3) Testing a timer/counter
Specified values are written as the present and set values of a device specified by the user.
- (4) Testing buffer memory
A specified value is written to buffer memory specified by the user.

3 The display format and device comment/no-comment display can be switched.

For further information, see the following:

☞ Section 2.4.4 Switching the display format (DEC/HEX) and comment/no-comment display

(Test example)



- (1) Switching the display format
Word device values are displayed in decimal or hexadecimal numbers on the entry, batch, TC, and BM monitors.
- (2) Device comment display
Comments written in the controller are displayed when a controller device is monitored.

4 Other stations can be monitored.

You can monitor other stations in the data link system containing the GOT (or GOT-connected station), network system or CC-Link system.

For further information about the connection forms that can be monitored, see the following:



Section 2.2.1 System configuration

2.2 Specifications

2.2.1 System configuration

This subsection describes the controller names and the connection forms between the GOT and the controller that can be covered by the system monitor function.
For further information about communication units and cables for each connection form, see the following:

 GOT1000 Series Connection Manual

1

Target controller

Controller
QCPU (Q mode), Q series motion controller CPU
QSCPU*1
QnACPU
ACPU/QCPU (A mode), A series motion controller CPU
FXCPU
Remote I.O station (MELSECNET/H system)
MELDAS C6/C64

*1 The GOT cannot write data to devices in the QSCPU. (The test operation is not available.)

2 Connection type

(1) When the GOT is connected to a QCPU (Q mode), Q series motion controller CPU, or QSCPU

(○: Available, △: Partly restricted, ×: Unavailable)

Function		Connection type between GOT and controller																Reference section	
Name	Description	Bus connection *9		Direct CPU connection *9		Computer link connection *9		Ethernet connection		MELSECNET/H connection, MELSECNET/10 connection		CC-Link IE*5		CC-Link connection					
		GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11		
Entry monitor	Monitoring present values by entering devices to be monitored in advance	○	○	○	○	○	○				△*2		○				○	○	2.5
Batch monitor	Monitoring the present value of n devices from a specified device																		2.6
TC monitor	Monitoring the present value, set value, contact point, and coil of m devices from a specified device																		2.7
BM monitor	Monitoring the present value of x devices in specified buffer memory of a specified intelligent function module	△*1	△*1	△*1	△*1	△*1	△*1				△*1*2		△*1				△*1	△*1	2.8
Data change by test operation	Setting/Resetting bit devices						○	○											2.9
	Changing the present value of word devices and buffer memory						△*3	△*3	△*4	×		×		×	△*4	×			
	Changing the present value of TC (possible during TC monitoring)																		
	Changing the set value of TC (possible during TC monitoring)*8	△*4	△*4	△*4	△*4					△*2*4		△*4				△*4	△*4		
Quick test	Changing device values by performing a quick test						△*4	△*4											2.4.5
Display switching	Displaying device comments																		2.4.4
	Displaying word device and buffer memory values in decimal or hexadecimal																		

*1 These items cannot be monitored when a motion controller (Q series) is monitored.

*2 When the GOT is connected to the MELSECNET/10, use a QCPU and a network module (QJ71LP21, QJ71LP21-25, QJ71LP21S-25, QJ71LP21G, QJ71BR11) of function version B or a later version.

*3 The present value of Z cannot be changed. None of the connection types supports V.

*4 When a motion controller (Q series) is connected, device comments cannot be displayed.

*5 Indicates the CC-Link IE controller network connection.

*6 Indicates CC-Link connection (Intelligent device station).

*7 Indicates CC-Link connection (via G4).

*8 When a QCPU redundant system is used, data of the set value cannot be changed.

*9 The QSCPU does not support the connection type.

(2) When the GOT is connected to a QnACPU

(○ : Available, △ : Partly restricted, × : Unavailable)

Function		Connection form between GOT and controller														Reference section		
Name	Description	Bus connection		Direct CPU connection		Computer link connection		Ethernet connection		MELSECNET/10 connection		CC-Link connection						
		GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	ID*4	G4*5					
Entry monitor	Monitoring present values by entering devices to be monitored in advance	△ *3	△ *3	△ *3	△ *3			△ *3	×	△ *2						2.5		
Batch monitor	Monitoring the present value of n devices from a specified device																2.6	
TC monitor	Monitoring the present value, set value, contact point, and coil of m devices from a specified device																	2.7
BM monitor	Monitoring the present value of x devices in specified buffer memory of a specified intelligent function module																		2.8
Data change by test operation	Setting/Resetting bit devices					2.9												
	Changing the present value of word devices and buffer memory						△ *2			△ *2								
	Changing the present value of TC (possible during TC monitoring)																	
	Changing the set value of TC (possible during TC monitoring)																	
Quick test	Changing device values by performing a quick test						△ *3			△ *3		2.4.5						
Display switching	Displaying device comments						2.4.4											
	Displaying word device and buffer memory values in decimal or hexadecimal																	

*1 When the GOT is connected to the MELSECNET/10, use a QCPU and a network module (QJ71LP21, QJ71LP21-25, QJ71LP21S-25, QJ71LP21G, QJ71BR11) of function version B or a later version.

*2 The present value of Z cannot be changed. None of the connection forms supports V.

*3 When the GOT is connected to a QnACPU whose date shown on the rating plate is earlier than 9707B, device comments cannot be displayed.

*4 Indicates CC-Link connection (Intelligent device station).

*5 Indicates CC-Link connection (via G4).

(3) When the GOT is connected to a ACPU/QCPU (A mode) or A series motion controller CPU

(○: Available, △: Partly restricted, ×: Unavailable)

Function		Connection form between GOT and controller														Reference section
Name	Description	Bus connection		Direct CPU connection		Computer link connection		Ethernet connection		MELSECNET/10 connection		CC-Link connection				
		GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	ID*3		G4*4		
Entry monitor	Monitoring present values by entering devices to be monitored in advance	○	○	○	○	△*2	△*2				○				○	2.5
Batch monitor	Monitoring the present value of n devices from a specified device															2.6
TC monitor	Monitoring the present value, set value, contact point, and coil of m devices from a specified device															2.7
BM monitor	Monitoring the present value of x devices in specified buffer memory of a specified intelligent function module	△*1	△*1	△*1	△*1	△*1	△*1				△*1				△*1	2.8
Data change by test operation	Setting/Resetting bit devices					○	○									2.9
	Changing the present value of word devices and buffer memory					△*2	△*2	○	×		×	○	×		×	
	Changing the present value of TC (possible during TC monitoring)															
	Changing the set value of TC (possible during TC monitoring)	○	○	○	○		○			○				○		
Quick test	Changing device values by performing a quick test					△*2	△*2									2.4.5
Display switching	Displaying device comments															2.4.4
	Displaying word device and buffer memory values in decimal or hexadecimal					○	○									

*1 These items cannot be monitored when an A motion controller CPU is monitored.

*2 V, Z, and A cannot be monitored, or their present values cannot be changed.

*3 Indicates CC-Link connection (Intelligent device station).

*4 Indicates CC-Link connection (via G4).

(4) When the GOT is connected to an FXCPU

(○ : Available, △ : Partly restricted, × : Unavailable)

Function		Connection form between GOT and controller		Reference section
Name	Description	Direct CPU connection		
		GT16/GT15	GT11	
Entry monitor	Monitoring present values by entering devices to be monitored in advance	△ ^{*2}	△ ^{*2}	2.5
Batch monitor	Monitoring the present value of n devices from a specified device			2.6
TC monitor	Monitoring the present value, set value, contact point, and coil of m devices from a specified device	△ ^{*1*2}	△ ^{*1*2}	2.7
BM monitor	Monitoring the present value of x devices in specified buffer memory of a specified special function unit/block	×	×	2.8
Data change by test operation	Setting/Resetting bit devices	△ ^{*2}	△ ^{*2}	2.9
	Changing the present value of word devices and buffer memory	△ ^{*2}	△ ^{*2}	
	Changing the present value of TC (possible during TC monitoring)			
	Changing the set value of TC (possible during TC monitoring)	×	×	
Quick test	Changing device values by performing a quick test	△ ^{*2}	△ ^{*2}	2.4.5
Display switching	Displaying device comments	×	×	2.4.4
	Displaying word device and buffer memory values in decimal or hexadecimal	△ ^{*2}	△ ^{*2}	

*1 The set value and coil of T/C cannot be monitored.

*2 V, Z, and A cannot be monitored, or their present values cannot be changed.

(5) When the GOT is connected to a remote I/O station of MELSECNET/H system

(○: Available, △: Partly restricted, ×: Unavailable)

Function		Connection form between GOT and controller														Refer-ence section	
Name	Description	Bus connection		Direct CPU connection		Computer link connection		Ethernet connection		MELSECNET/ H connection, MELSECNET/ 10 connection		CC-Link connection					
		GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	ID*2		G4*3			
Entry monitor	Monitoring present values by entering devices to be monitored in advance	×	×	○	○	○	○									2.5	
Batch monitor	Monitoring the present value of n devices from a specified device																
TC monitor	Monitoring the present value, set value, contact point, and coil of m devices from a specified device																
BM monitor	Monitoring the present value of x devices in specified buffer memory of a specified intelligent function module																
Data change by test operation	Setting/Resetting bit devices																
	Changing the present value of word devices and buffer memory					△*1	△*1										
	Changing the present value of TC (possible during TC monitoring)																
	Changing the set value of TC (possible during TC monitoring)*4																
Quick test	Changing device values by performing a quick test					○	○										2.4.5
Display switching	Displaying device comments					2.4.4											
	Displaying word device and buffer memory values in decimal or hexadecimal																

*1 The present value of V and Z cannot be changed.

*2 Indicates CC-Link connection (Intelligent device station).

*3 Indicates CC-Link connection (via G4).

*4 When a QCPU redundant system is used, data of the set value cannot be changed.

(6) When the GOT is connected to a MELDAS C6/C64

(○ : Available, △ : Partly restricted, × : Unavailable)

Function		Connection form between GOT and controller														Reference section									
Name	Description	Bus connection		Direct CPU connection		Computer link connection		Ethernet connection		MELSECNET/10 connection		CC-Link connection													
		GT16/GT15	GT11	GT16/GT15	GT11	GT16/GT15	GT11	GT16/GT15	GT11	GT16/GT15	GT11	ID*1		G4*2											
Entry monitor	Monitoring present values by entering devices to be monitored in advance	×	×	○	×	×	×	○	×	○	×	○	×	×	×	2.5									
Batch monitor	Monitoring the present value of n devices from a specified device			○				○		○		2.6													
TC monitor	Monitoring the present value, set value, contact point, and coil of m devices from a specified device			×				×		×							2.7								
BM monitor	Monitoring the present value of x devices in specified buffer memory of a specified intelligent function module																	2.8							
Data change by test operation	Setting/Resetting bit devices																		2.9						
	Changing the present value of word devices and buffer memory																								
	Changing the present value of TC (possible during TC monitoring)																								
Changing the set value of TC (possible during TC monitoring)	×							×		×		×													
Quick test	Changing device values by performing a quick test																								2.4.5
Display switching	Displaying device comments									○								○		○		○			
	Displaying word device and buffer memory values in decimal or hexadecimal																								

*1 Indicates CC-Link connection (Intelligent device station).

*2 Indicates CC-Link connection (via G4).

3 Required Extended function OS

- (1) The Extended function OS shown in the table below is required.

Extended function OS	OS memory space (user area)				Option function board		
	GT16		GT15	GT11	GT16	GT15	GT11
	Built-in flash memory (ROM)	User memory (RAM)					
System monitor	746KB	746KB	746KB	0KB	Not required	Not required	Not required

- (2) Install the Extended function OS.
 Install System monitor (Extended function OS) in the GOT.
 For a detailed installation procedure, see the following:



Section 1.1.3 Outline of procedure to the operation of each function

Before transferring data from GT Designer 2 to the GOT (installing OS', downloading project data), it is necessary to confirm the free capacity of the user area in the specified drive and the size of the data to be transferred.

For further information, see the following:



GT Designer 2 Basic Operation/Data Transfer Manual
 Subsection 8.1.2 Drive capacity required for data transfer

2.2.2 Devices that can be monitored

For further information about the monitor device names that can be monitored and the scope, see the following:

 GT Designer2 Version □ Screen Design Manual


2.2.3 Access range

With Universal model QCPU, the GOT can monitor up to 64 stations.

When the GOT is connected to the remote I/O station in MELSECNET/H network system, only the master station can be monitored.

The access range other than above is the same as the access range when the GOT is connected to a controller.

Refer to the following manual for details of the access range.

 GT Designer2 Version □ Screen Design Manual (2.7 Controller that can be monitored and the Access Range)

2.2.4 Precautions

(1) Monitoring and testing real number data

Real number data cannot be monitored and tested.

All word devices containing real number data are monitored in integer data (binary data).

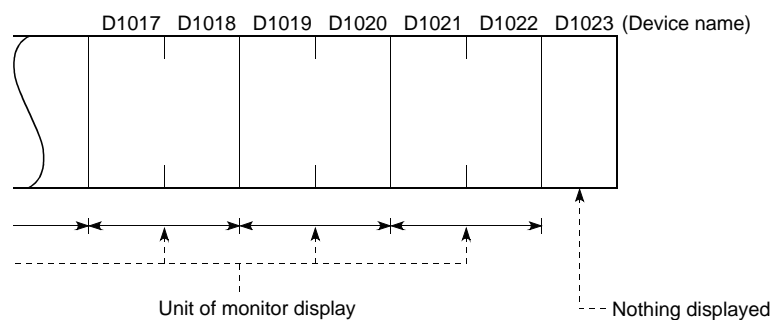
(2) Monitoring devices in 32-bit (two-word) module

When monitoring word devices (T, C, D, W, etc.) in 32-bit (two-word) module, those with 32 bits of data remaining are monitored.

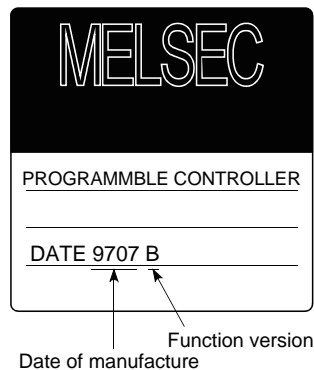
Devices with 16 bits (one-word) of data remaining are not monitored.

If an odd number is specified for the first monitor device number, the last device number of the specified controller will not be displayed.

(Example) When the data entry of the A2NCPU is monitored in units of 32 bits from odd numbers (D1, D3 ...)



- (3) Changing the T/C set values of large-size and small-size QnACPU and displaying device comments
- The T/C set values of QnACPU whose date on the CPU rating plate is after [9707B] can be changed, and device comments can be displayed.
- <Information on the rating plate>



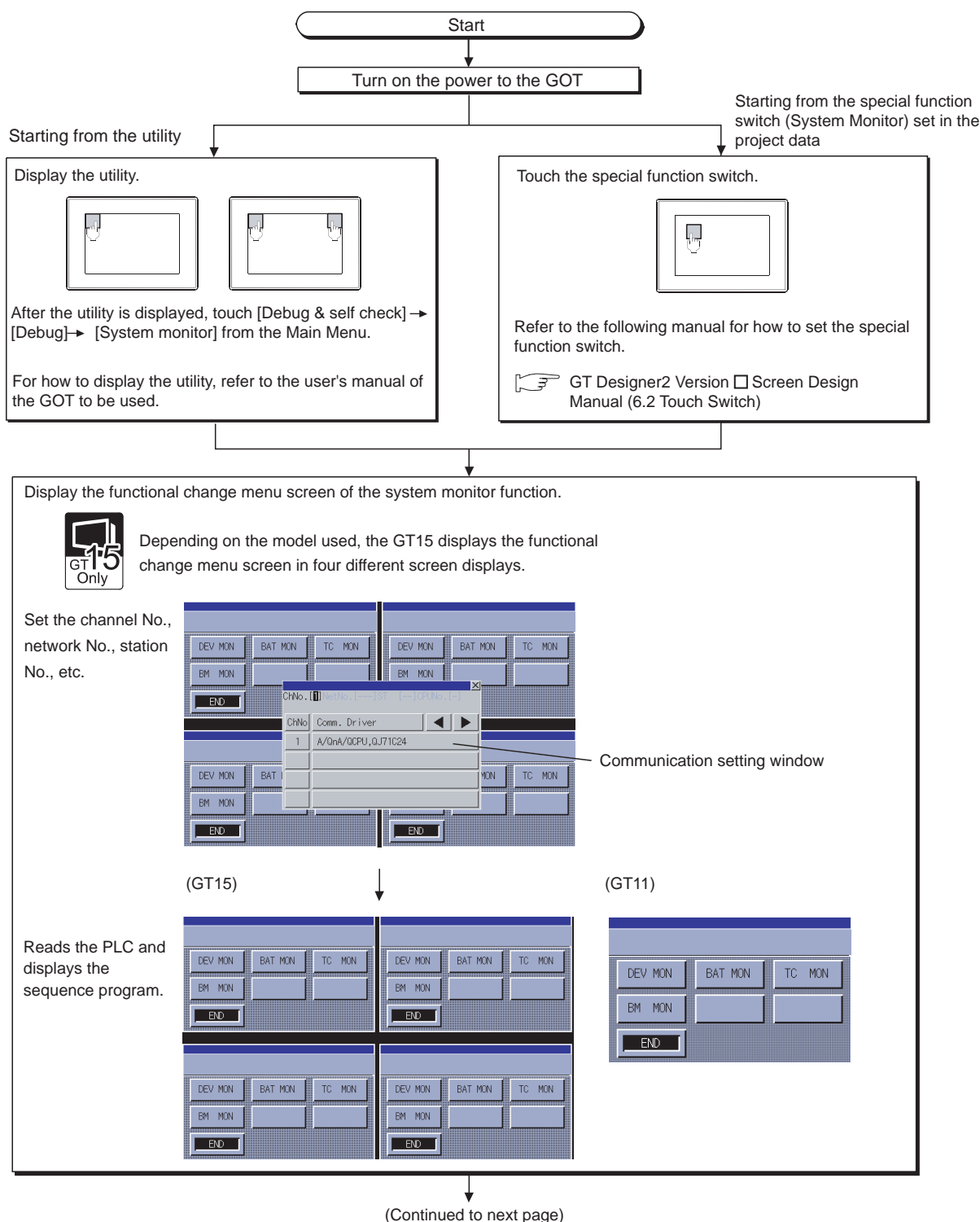
- (4) Programs capable of changing timer/counter set values
- Only the main program can change the timer/counter set values of AnNCPUs, AnACPU, and AnUCPU.
 - When executing multiple programs with the QCPU (Q mode) and QnACPU, setting values of timer/counter can be changed only to the program (scan execution type program set at the lowest number among them in parameter settings of GX Developer) whose file name is displayed on the TC Monitor screen.
- Note that a file to be displayed cannot be changed on the GOT.
- (5) Z0 of QCPUs and QnACPU and Z0 and V0 of ACPUs
- Z0 of QCPUs and QnACPU and Z0 and V0 of ACPUs are displayed as Z and V respectively.

2.3 Display

This section describes the operation procedure from turning on the power to the GOT to system monitor display.

2.3.1 Outline until starting the system monitor

This subsection describes the flow until the system monitor function screen is displayed after System monitor (Extended function OS) is installed in the GOT.



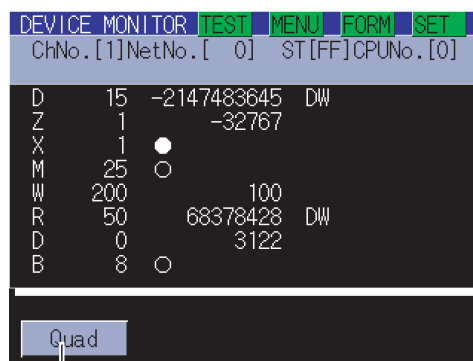
From previous page

Changing monitor screen from full mode to quad mode (For GT1555-VTBD)



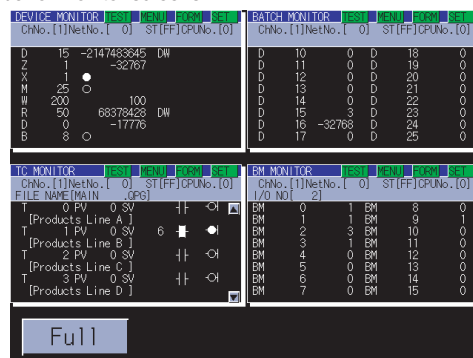
For the GT1555-VTBD, the monitor screen can be switched between the full and quad modes with the button for switching the number of monitor screens
When the monitor screen is switched to the full mode, the GOT displays a monitor screen displayed on the upper left in the quad mode in the full mode.*1

When starting the system monitor, the GOT displays the monitor screen in the full mode.



The button for switching the number of monitor screens

The monitor screen is switched between the full and quad modes with the button for switching the number of monitor screens.



*1 The monitor screen in the full mode is four times bigger than each monitor screen in the quad mode.
For displaying screens commonly used in the system, including the key window, the monitor screen size in the full mode is the same as each monitor screen size in the quad mode.



- (1) How to display the utility

For how to display the utility, refer to the following.



GT16 User's Manual (8.3 Utility Display)

GT15 User's Manual (9.3 Utility Display)

GT11 User's Manual (9.3 Utility Display)

- (2) Displaying the start screen on the GT16 and GT15

If you reactivate the system monitor function without turning off the power to the GOT, the last displayed screen appears.

- (3) Displaying communication setting window

After turning on the GOT, the communication setting window is displayed at the first startup of the system monitor only.

For displaying the communication setting window at the second or later startup, touch the **ENTRY** button on the system monitor screen.

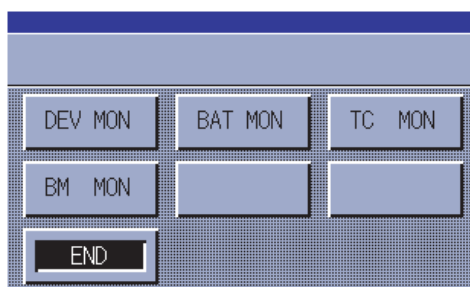
- (4) If the project data has not been downloaded

The system monitor can be started from the utility even if the project data has not been downloaded to the GOT.

2.4 Operation Procedure Common to the System Monitor Screens

2.4.1 Functional change menu screen

This subsection describes the configuration of the functional change menu screen and the functions of the keys displayed on it.



The table below describes the functions of the keys displayed on the functional change menu screen.

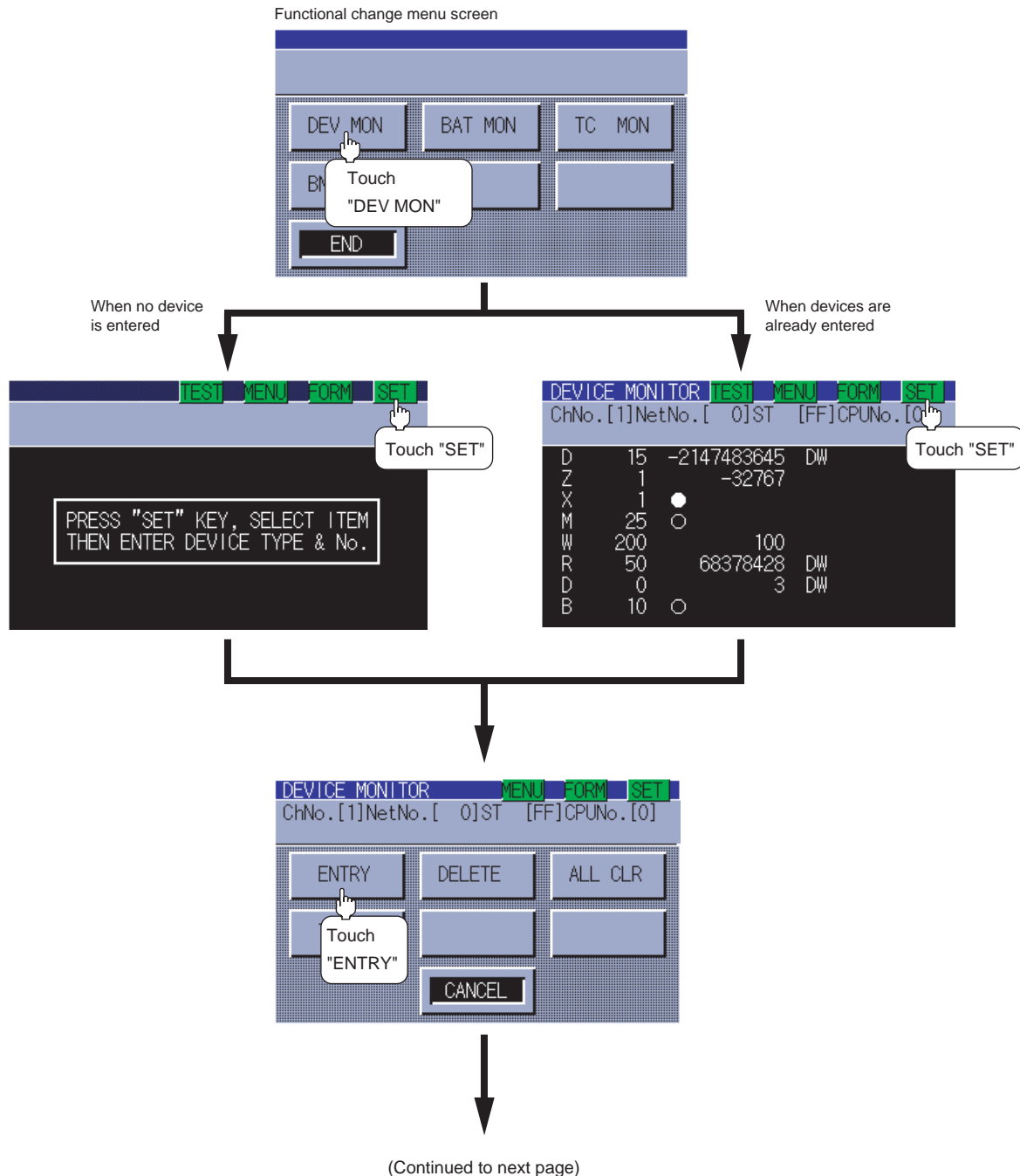
Key	Function
DEV MON	Performs entry monitoring in the Entry Monitor window. → Section 2.5 Entry Monitor
BAT MON	Performs batch monitoring in the Batch Monitor window. → Section 2.6 Batch Monitor
TC MON	Performs TC monitoring in the TC Monitor window. → Section 2.7 TC Monitor (Monitoring Timers and Counters)
BM MON	Performs buffer memory monitoring in the BM Monitor window. → Section 2.8 BM Monitor (Monitoring Buffer Memory)
END	The system monitor function is deactivated, and the screen returns to Main Menu of the utility. If the system is activated from the User screen, the screen returns to it.

2.4.2 Entering monitor devices (specifying monitor stations and devices)

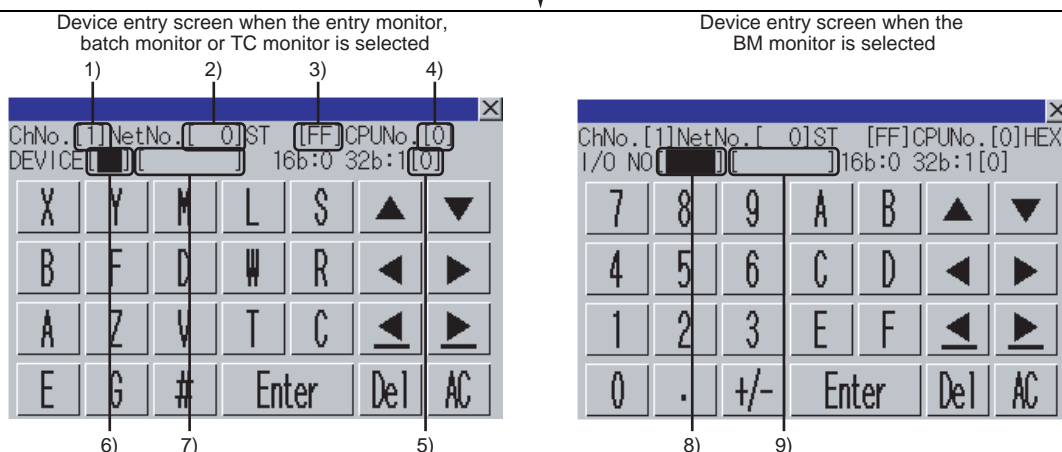
This subsection describes how to specify network numbers, monitor stations, and monitor devices by taking the Entry Monitor window as an example.

The procedure for specifying network numbers, monitor stations, and monitor devices is the same even if other items than the "entry monitor."

(Example) Entering a monitor device when the entry monitor is used



(From previous page)



Set 1) to 9) as shown in the table below, and then touch the **Enter** key.
For the operation of key windows, see the following:

Section 2.4.3 Key window setting columns and operation procedure

No.	Item	Description of setting					
		Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	MELSECNET/H connection, MELSECNET/10 connection	CC-Link connection ID*2 G4*3
1)*1	Channel No.	Sets the channel number of the controller targeted to the system monitor.					
2)	Network No.	0			1 to 239	0: Host loop 1 to 255: Specified loop	0
3)*4	Station No.	FF			1 to 64	FF: When the host station is selected 0: When the control station is selected 1 to 64: When a normal station is selected	FF: When the host station is selected 0: When the master station is selected 1 to 64: When a local station is selected
4)	CPU No.	0 to 4: This item must be set only when the system is connected to multiple QCPUs. It is not necessary when the system is connected to another CPU.					
5)	Data range	1: Indicates that the device value is a 32-bit (two-word) module. 0: Indicates that the device value is a 16-bit (one-word) module.					
6)*1	Device name	Set the name and number of the device to be monitored.					
7)*1	Device number						
8)*1	I/O number	When the initial I/O signal of module is displayed with three digits, specify the first two digits.					
9)*1	Initial device number	Set the initial device number of the buffer memory in decimal.					

*1 For devices that can be set, see the following:

GT Designer 2 Version □ Screen Design Manual (Section 2.9 Devices that can be set)

*2 Indicates CC-Link connection (Intelligent device station).

*3 Indicates CC-Link connection (via G4).

*4 When the station No. is set to the host station (FF), set the network No. to 0.



Displaying the data range

The Entry Monitor, Batch Monitor, TC Monitor, and BM Monitor screens display the data range as shown below.

- DW : 32-bit (two-word) module
- Nothing displayed : 16-bit (one-word) module

(Continued to next page)

(From previous page)



DEVICE ENTRY



ChNo. [1] NetNo. [0] ST [FF] CPUNo. [0]
DEVICE [] [] 16b:0 32b:1 [0]

X

Y

M

L

S

▲

▼

B

F

D

W

R

◀

▶

A

Z

V

T

C

◀

▶

E

G

#

Enter

Del

AC

Touch
"x"



DEVICE MONITOR TEST MENU FORM SET

ChNo. [1] NetNo. [0] ST [FF] CPUNo. [0]

D	15	-2147483645	DW
Z	1	-32767	
X	1	●	
M	25	○	
W	200	100	
R	50	68378428	DW
D	0	3	DW
B	10	○	



(1) Retaining entered information

If the system monitor function is reactivated without turning off the power to the GOT, the last displayed information will be retained.

If the power to the GOT is turned on again and the system monitor function is reactivated, the last displayed information will be deleted.

(2) Entry unit of monitor devices

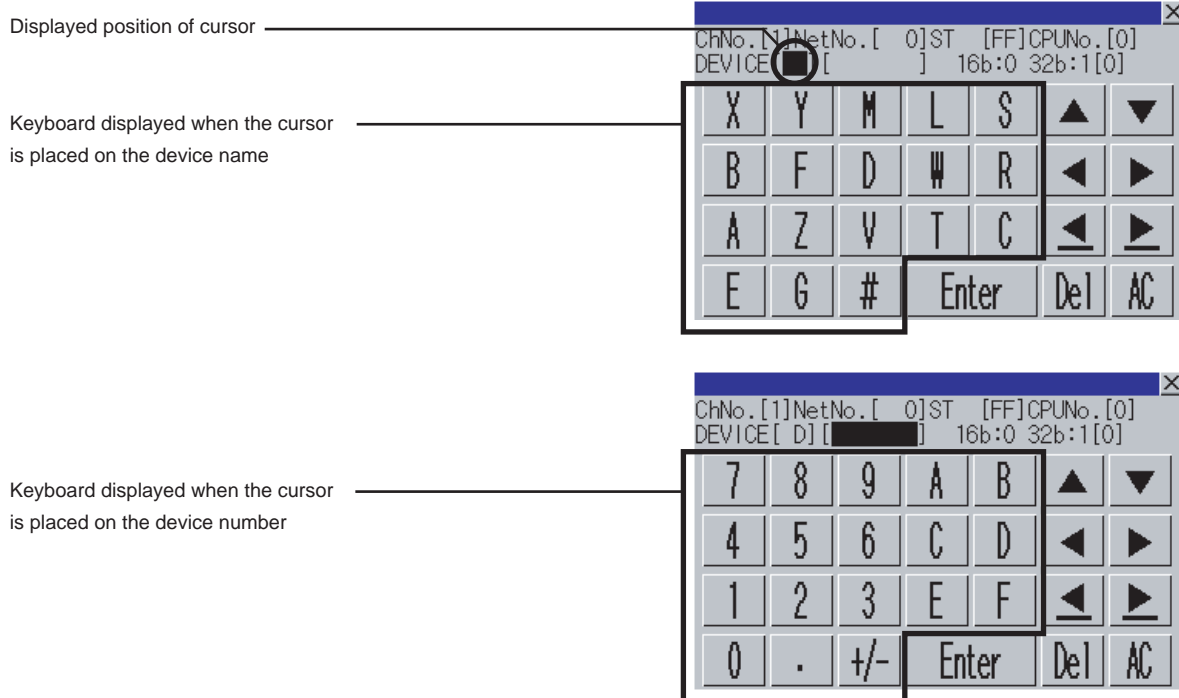
Each monitor device is entered in a combination of a network number and a CPU station number. If the CPU station number is changed, the entered monitor device will become invalid.

2.4.3 Key window setting columns and operation procedure

1 Operating the key window

- 1 Using the ◀ and ▶ keys, move the cursor to the item you want to set.

The displayed keyboard depends on the position of the cursor as shown below.



- 2 If necessary, enter numbers or characters from the keyboard.
- **Del** key: Used to delete a character of the entered information.
 - **AC** key: Used to delete all characters under the cursor.
 - The ▲/▼ keys without a description do not function.
- 3 Entry is completed by touching the **Enter** key.
- 4 The keyboard closes by touching the **×** key.

2.4.4 Switching the display format (DEC/HEX) and comment/no-comment display

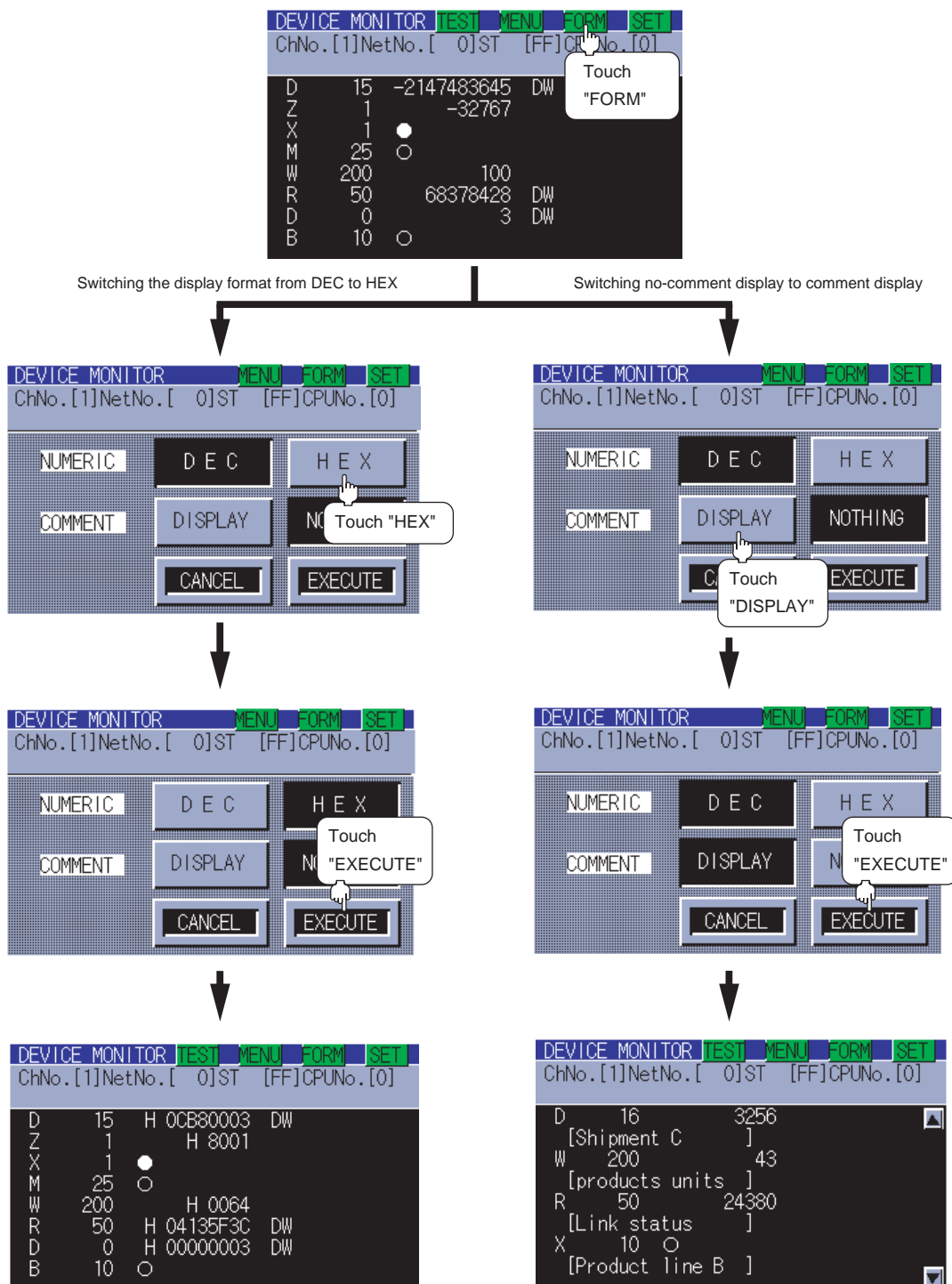
This subsection describes how to switch the display format and comment/no-comment display.

The Entry Monitor window is taken here as an example to describe the specification of a monitor station and a monitor device when the system monitor function is executed.

The procedure for switching the display format (DEC/HEX) and comment display when another item is selected. (Example of switching when the entry monitor is selected)

Switching the display format from DEC to HEX

Switching no-comment display to comment display



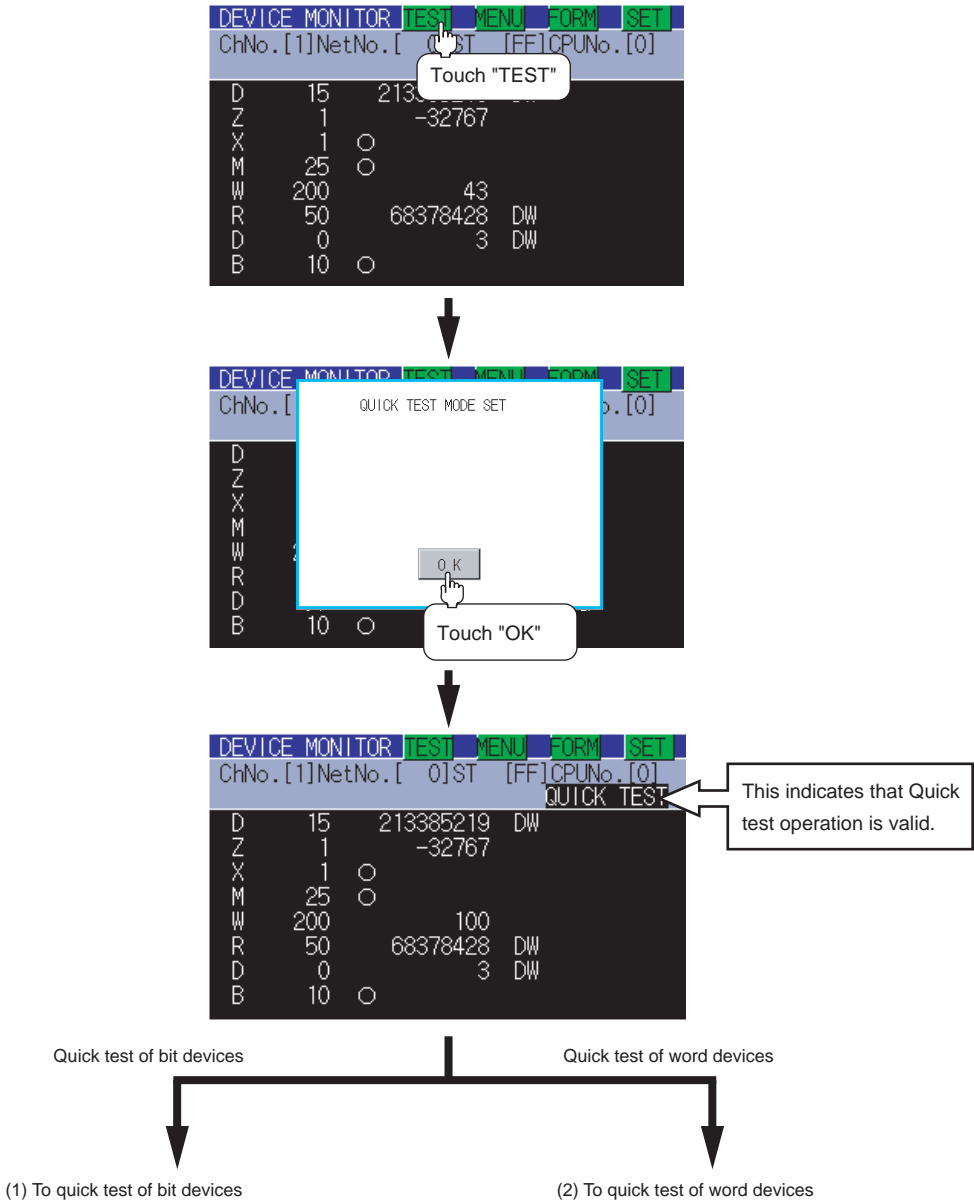
- (1) Changing the comment or comment capacity of the controller
If you change a comment or comment capacity of the controller after the system monitor function is activated, the comment may not be properly displayed on each monitor screen.
After a comment or comment capacity is changed, turn off the GOT and turn it on again.
- (2) Switching the display format (DEC/HEX)
The present value of word devices and the present value and set value of timers/counters will be displayed in decimal or hexadecimal numbers.
- (3) Switching comment/no-comment display
The comments written to the target controller will be displayed or not be displayed. (Priority of comment display: Extension comment > Comment)
- (4) Comment/No-comment display
 - (a) The BM monitor does not display comments.
 - (b) Comments will not be displayed when any of the CPUs listed below is monitored.
 - FXCPU
 - QnACPU or Q series motion controller CPU whose date on the rating plate is earlier than 9707B
 - (c) Comments will not be displayed when any of the devices listed below is monitored.
 - Internal device of the GOT (GB, GD, GS)
 - Host device (B, W, SB, SW) when the MELSECNET/H or MELSECNET/10 is connected
 - Host device (X,Y, WW, WR) when a CC-Link is connected
 - (d) Displaying the comments of QCPUs (Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, Q25HCPU, Q12PHCPU, Q25PHCPU, Q12PRHCPU, Q25PRHCPU, Q02UCPU, Q03UDCPU, Q04UDHCPU, Q06UDHCPU)
Comments will not be displayed when the following PLC parameters (PLC file settings) are set:
 - When the comment file is set to "Not used"
 - When the comment file is set to "Use the same file name as the program"
 - When a password is set to the comment file
 - When a comment file is stored in program memory
 - (e) Displaying the comments of QCPUs (Q00JCPU, Q00CPU, Q01CPU)
Comments will not be displayed when the following PLC parameter (PLC file setting) is set:
 - When the comment file "MAIN" does not exist in the program memory
 - (f) Displaying the comments of QnACPU
With a QnACPU whose date on the rating plate is earlier than 9707B, comments cannot be displayed.
Use a QnACPU whose date on the rating plate is 9707B or later.
Also, comments will not be displayed when the following settings are made to the PLC parameter (PLC file setting) is set.
 - When the comment file is not set "Not used"
 - When the comment file is set to "Use the same file name as the program"
 - When a keyword is entered for each memory

2.4.5 Quick test operation of monitor devices

! Danger

- Before performing the quick test operations of the system monitor function (such as turning ON or OFF bit device, changing the word device current value, changing the settings or current values of the timer or counter, and changing the buffer memory current value), read through the manual carefully and make yourself familiar with the operation method.
During quick test operation, never change the data of the devices which are used to perform significant operation for the system.
False output or malfunction can cause an accident.

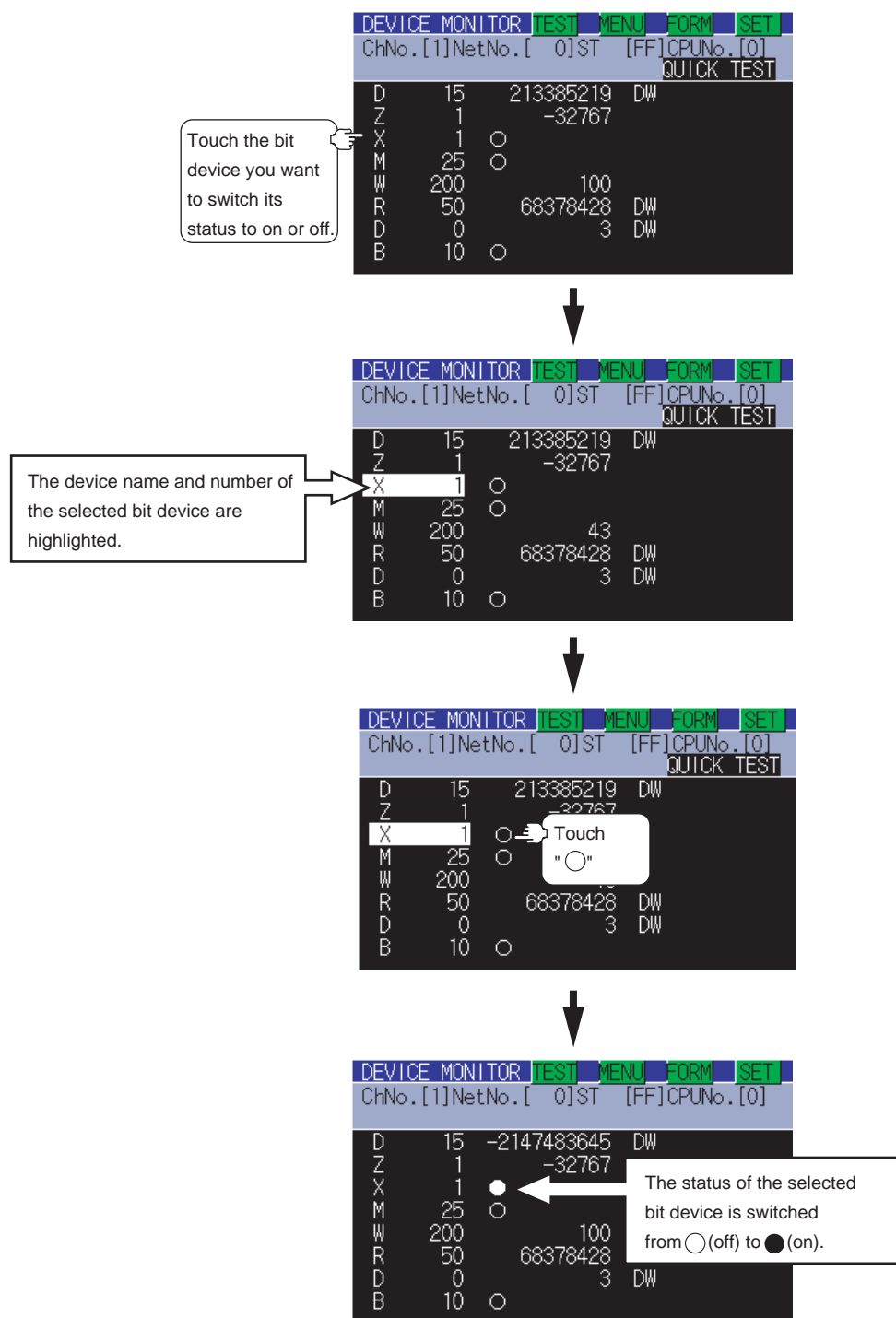
The quick test operation procedure for monitor devices is described below.
The Entry Monitor screen is taken as an example to describe quick test operation when the system monitor function is executed.
The operation procedure is the same even if the batch monitor, TC monitor or BM monitor is selected.
(Example of quick test operation when the entry monitor is selected)



(1) Quick test of bit devices

(Operation example)

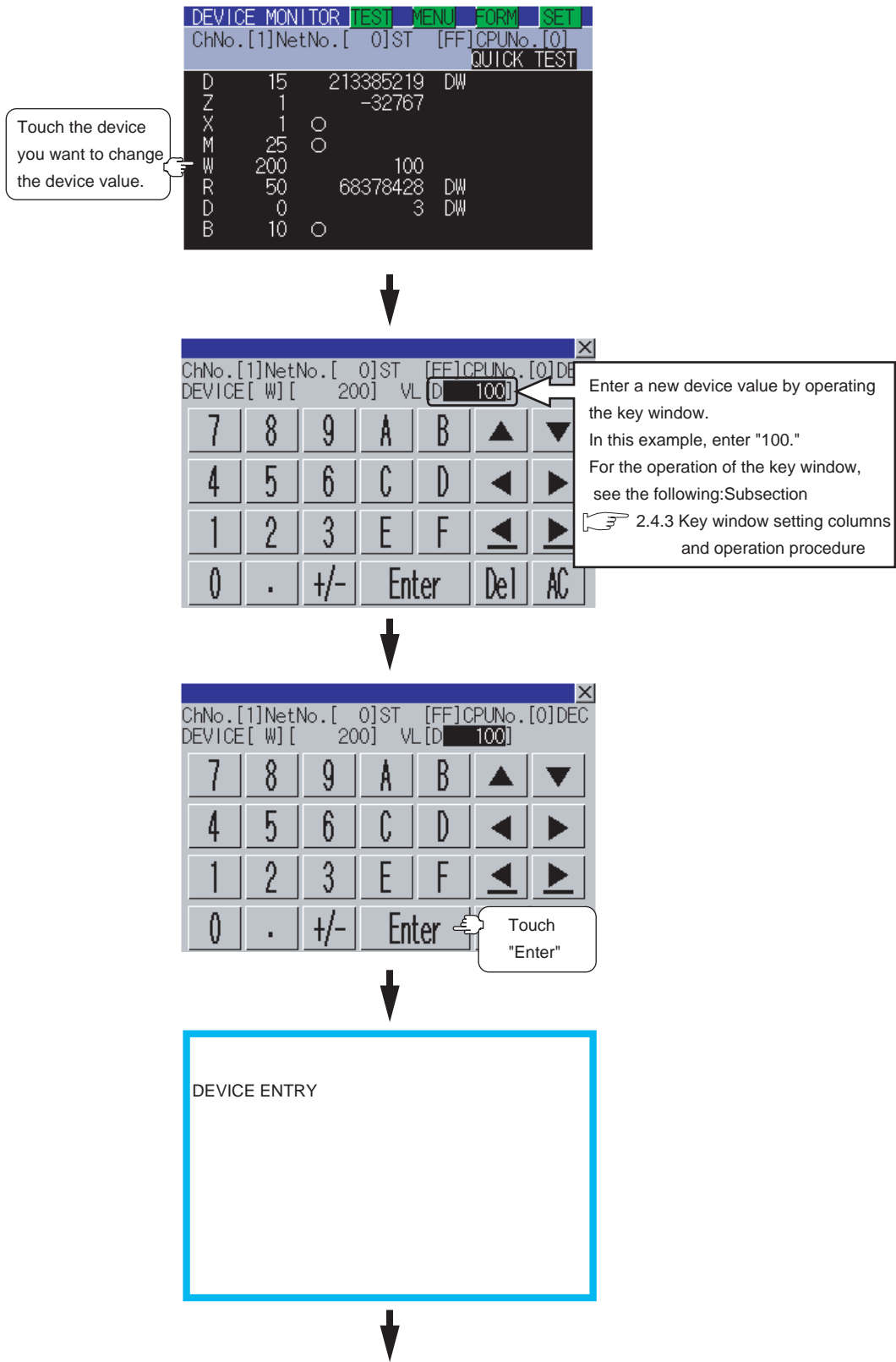
Change the status of bit device X001 from off (○) to on (●).



(2) Quick test of word devices
(Operation example)

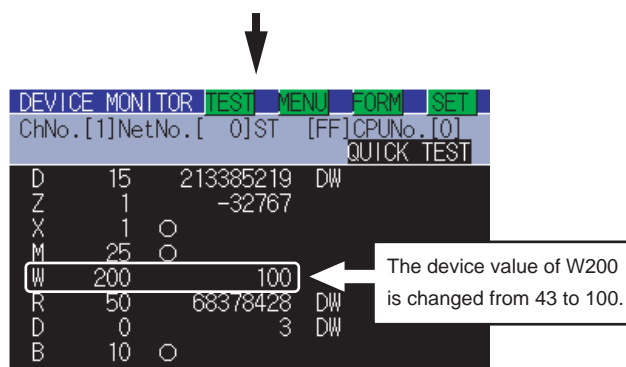
Change the device value of word device W200 from 43 to 100.

Conditions: Data range: 16 bits, device value display format: decimal number



(Continued to next page)

(From previous page)



Point

Effective number of digits of device values that can be changed

If an entered value exceeds the corresponding number of digits specified below, the device value cannot be changed.

[Decimal number]

16-bit (one-word) module : Six digits (including a digit for a sign)

32-bit (two-word) module : Ten digits (including a digit for a sign)

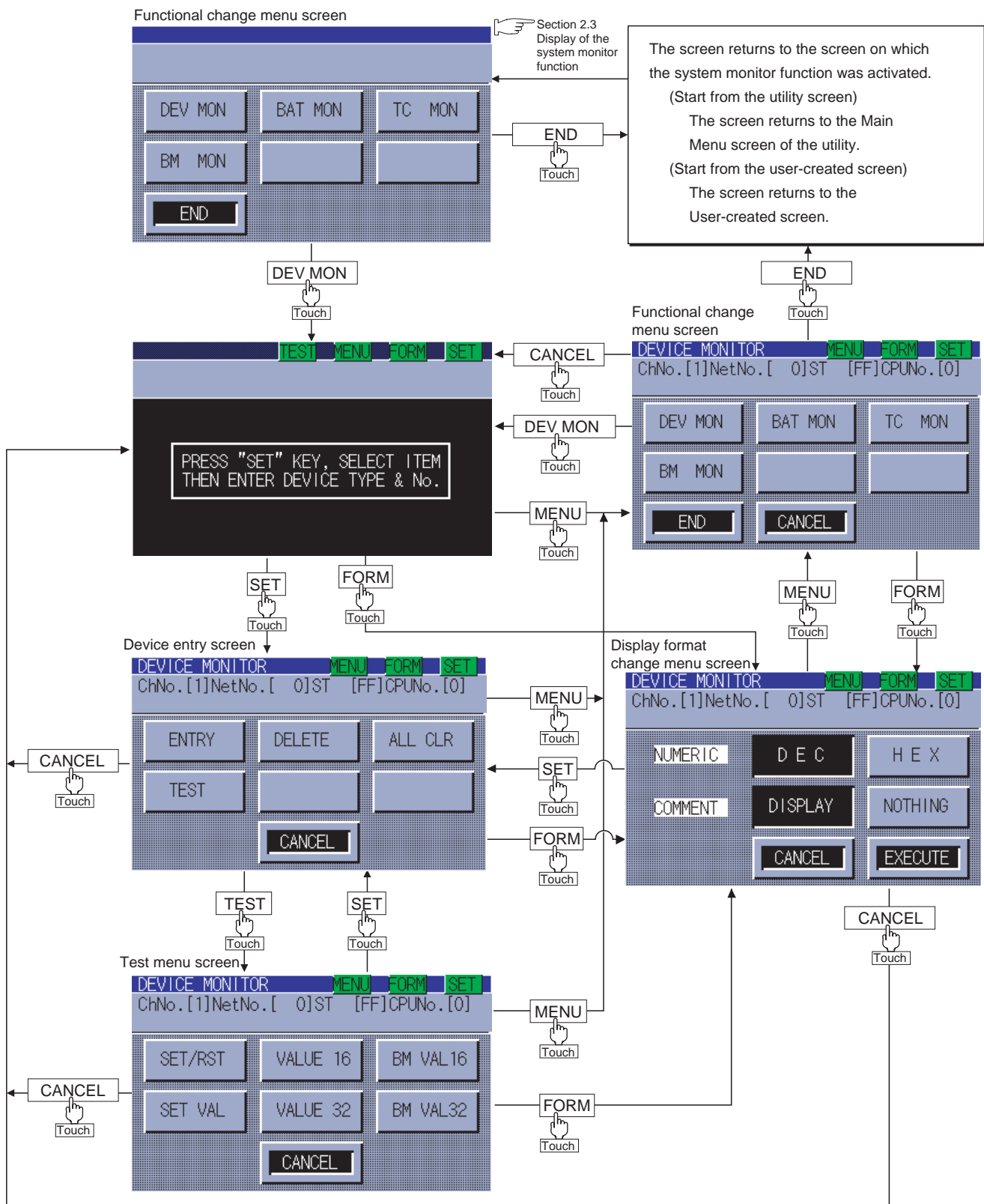
[Hexadecimal number]

16-bit (one-word) module : Four digits

32-bit (two-word) module : Eight digits

2.4.6 Changing screens

This subsection takes the entry monitor as an example to describe how to change screens.



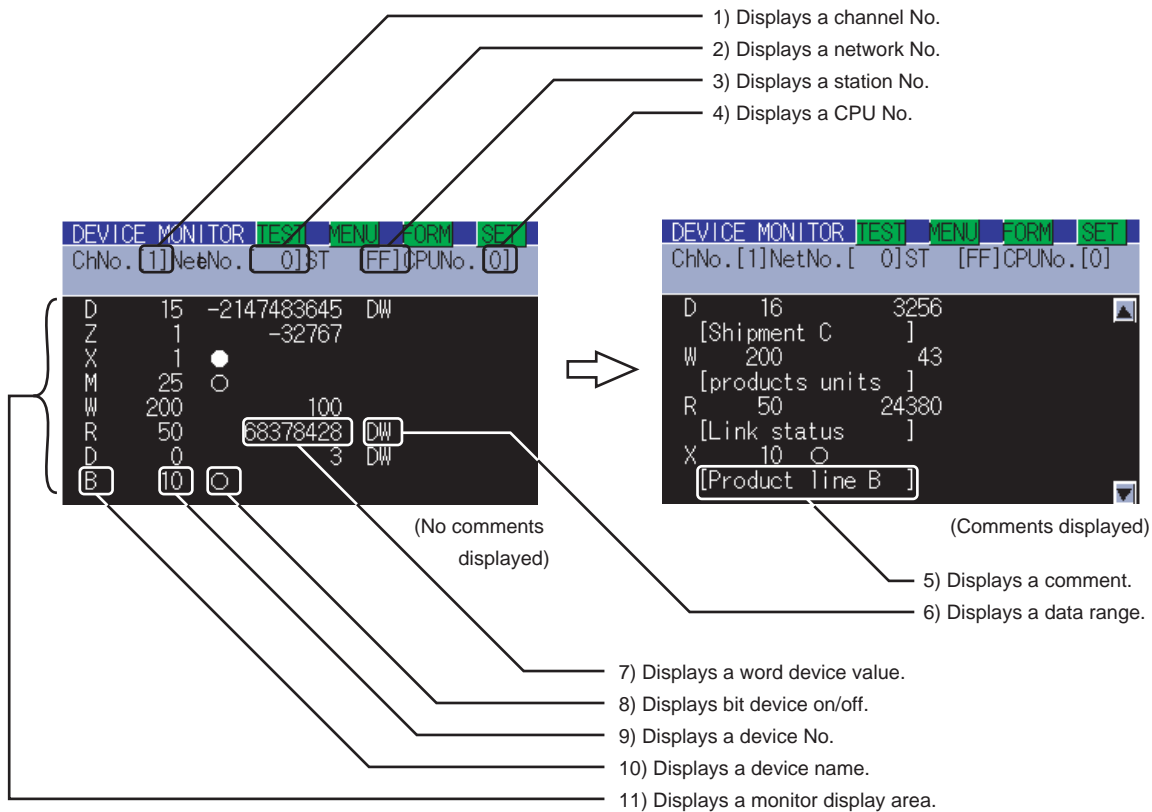
2.5 Entry Monitor

The device monitor is a function to enter devices to be monitored in advance and monitor only entered devices.

This section describes how to activate the entry monitor when the system monitor function is executed.















2.5.1 Information displayed on the Entry Monitor screen and key functions

- (1) The information displayed on the Entry Monitor screen is described below.
For the key functions, see the page that follows.




For further information about items 1) to 11) shown above, see the page that follows.

(2) The following table describes the key functions displayed on the Entry Monitor screen.

Key switch	Function
	Activates the Quick test operation.  Section 2.4.5 Quick test operation of monitor devices
	Switches the screen to the functional change menu screen to activate another monitor function or terminate the system monitor function.  Section 2.4.6 Changing screens
	Switches the screen to the display format switching screen to change the value display format (DEC/HEX) on the Entry Monitor screen or comment/no-comment display.  Section 2.4.4 Switching the display format (DEC/HEX) and comment/no-comment display
	Switches the screen to the Device entry screen to enter monitor devices or delete or test entry devices. <ul style="list-style-type: none"> Entering monitor devices:  Section 2.4.2 Entering monitor devices (specifying monitor stations and devices) Deleting entry devices:  Section 2.5.3 Deleting entry devices Test operation:  Section 2.9 Test Operation
 	Scroll displayed information upward or downward by a line to display the preceding or next monitor device that is not currently displayed. When five or more monitor devices are entered, these switches are available when their comments are displayed.  : Scrolls information upward by a line.  : Scrolls information downward by a line.

(3) The following table below describes the range of display of items 1) to 11) displayed

No.	Item	Description of setting						
		Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	MELSECNET/H connection, MELSECNET/10 connection	CC-Link connection	
							ID*1	G4 *2
1)	Channel No.	Sets the channel number of the controller targeted to the entry monitor.						
2)	Network No.	0			1 to 239	0: Host loop 1 to 255: Specified loop	0	
3)	Station No.	FF			1 to 64	FF: When the host station is selected 0: When the control station is selected 1 to 64: When a normal station is selected	FF: When the host station is selected 0: When the master station is selected 1 to 64: When a local station is selected	
4)	CPU No.	0 to 4: This item must be set only when the system is connected to multiple QCPUs. It is not necessary when the system is connected to another CPU.						
5)	Comment	Displays a comment (maximum number of characters: 16 one-byte characters) A comment is displayed when "DISPLAY" is selected for comment display on the display format switching screen.						
6)	Data range	DW: Indicates that the device value is a 32-bit (two-word) module. Nothing displayed: Indicates that the device value is a 16-bit (one-word) module.						
7)	Word device value	[Decimal number] 16-bit (one-word) module: Six digits (including a digit for a sign) are displayed. (Display example: - 12345) 32-bit (two-word) module: Ten digits (including a digit for a sign) are displayed. (Display example: - 123456789) [Hexadecimal number] 16-bit (one-word) module: Four digits are displayed. (Display example: H AB12) 32-bit (two-word) module: Eight digits are displayed. (Display example: H ABCDE123)						
8)	Bit device ON/OFF	○: ON ●: OFF						
9)	Device No.	Up to eight devices can be monitored with regard to each CPU station number.						
10)	Device name	For further information about device numbers and names that can be entered:  GT Designer 2 Version <input type="checkbox"/> Screen Design Manual						
11)	Monitor display area	When no comments are displayed: Up to eight devices can be displayed. When comments are displayed : Up to four devices can be displayed.						

*1: Indicates CC-Link connection (Intelligent device station).

*2: Indicates CC-Link connection (via G4).



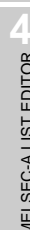
You can register up to eight entry devices.
If more than eight devices are registered, the oldest ones will be deleted one by one, and the eight latest entry devices will be monitored.
If necessary, delete unnecessary entry devices and re-enter ones you want to monitor.

1

OVERVIEW

2 SYSTEM MONITOR

3 LADDER MONITOR FUNCTION

5
MELSEC-FX LIST
EDITOR

6 INTELLIGENT MODULE MONITOR

7 NETWORK MONITOR

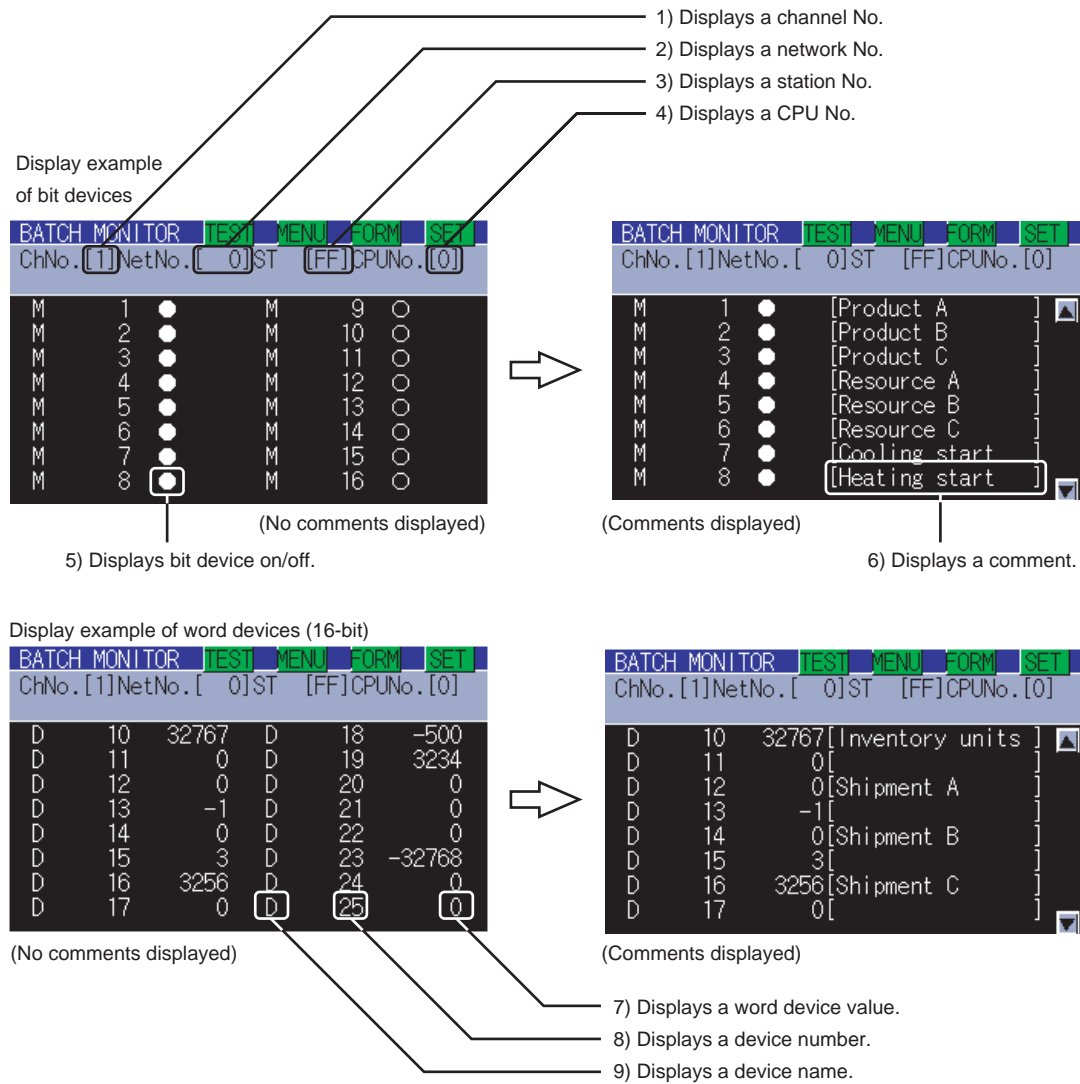
8. MOTION MONITOR

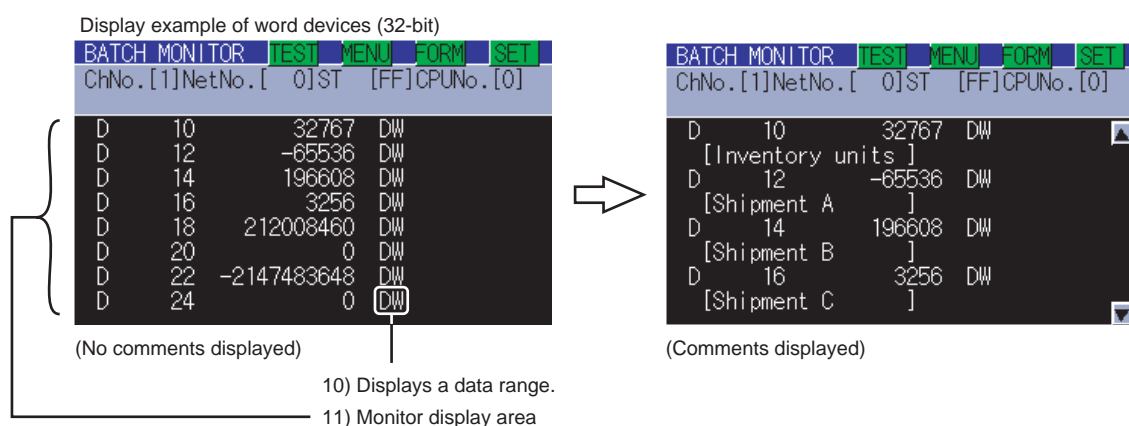
2.6 Batch Monitor

The batch monitor is a function to specify the head device of any device range to perform monitoring. This section describes how to operate the batch monitor when the system monitor function is executed.

2.6.1 Information displayed on the Batch Monitor screen and key functions

(1) The information displayed on the Batch Monitor screen is described below.





For further information about items 1) to 11) shown above, see the page that follows.



Number of devices displayed on a single screen

The number of devices displayed on a single screen depends on the setting of the data range, as shown below.

Word devices (16-bit) : 16 devices (no comments displayed), eight devices (comments displayed)














Word devices (32-bit) : Eight devices (no comments displayed), four devices (comments displayed)

Bit devices : 16 devices (no comments displayed), eight devices (comments displayed)


For further information about the setting of the data range, see the following:

Section 2.4.2 Entering monitor devices (specifying monitor stations and devices)

(2) The following table describes the key functions displayed on the Batch Monitor screen.

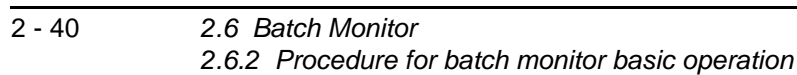
Key switch	Function
	Activates the Quick test operation.  Section 2.4.5 Quick test operation of monitor devices
	Switches the screen to the functional change menu screen to activate another monitor function or terminate the system monitor function.  Section 2.4.6 Changing screens
	Switches the screen to the display format switching screen to change the value display format (DEC/HEX) on the Batch Monitor screen or comment/no-comment display.  Section 2.4.4 Switching the display format (DEC/HEX) and comment/no-comment display
	Switches the screen to the Device entry screen to enter or test monitor devices. <ul style="list-style-type: none"> · Entering monitor devices :  Section 2.4.2 Entering monitor devices (specifying monitor stations and devices) · Test operation :  Section 2.9 Test Operation
 	Scroll displayed information upward or downward by a line to display the preceding or next monitor device that is not currently displayed. When five or more monitor devices are entered, these switches are available when their comments are displayed.  : Scrolls information upward by a line.  : Scrolls information downward by a line.

(3) The following table below describes the range of display of items 1) to 11) displayed.

No.	Item	Description of setting					
		Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	MELSECNET/H connection, MELSECNET/10 connection	CC-Link connection ID*1 G4*2
1)	Channel No.	Sets the channel number of the controller targeted to the batch monitor.					
2)	Net No.	0			1 to 239	0: Host loop 1 to 255: Specified loop	0
3)	Station No.	FF			1 to 64	FF: When the host station is selected 0: When the control station is selected 1 to 64: When a normal station is selected	FF: When the host station is selected 0: When the master station is selected 1 to 64: When a local station is selected
4)	CPU No.	0 to 4: This item must be set only when the system is connected to multiple QCPUs. It is not necessary when the system is connected to another CPU.					
5)	Bit device ON/OFF	○: ON ●: OFF					
6)	Comment	Displays a comment (maximum number of characters: 16 one-byte characters). A comment is displayed when "DISPLAY" is selected for comment display on the display format switching screen.					
7)	Word device value	[Decimal number] 16-bit (one-word) module: Six digits (including a digit for a sign) are displayed. (Display example: -12345) 32-bit (two-word) module: Ten digits (including a digit for a sign) are displayed. (Display example: -123456789) [Hexadecimal number] 16-bit (one-word) module: Four digits are displayed. (Display example: H AB12) 32-bit (two-word) module: Eight digits are displayed. (Display example: H ABCDE123)					
8)	Device No.	Up to 16 devices can be entered when the data range is word (16 bits). Up to eight devices can be entered when the data range is two-word (32 bits).					
9)	Device name	For further information about device numbers and names that can be entered:  GT Designer 2 Version <input type="checkbox"/> Screen Design Manual					
10)	Data range	DW: Indicates that the device value is a 32-bit (two-word) module. Nothing displayed: Indicates that the device value is a 16-bit (one-word) module.					
11)	Monitor display area	When no comments are displayed : Up to 16 devices can be displayed at a time (monitor module: one-word). Up to eight devices can be displayed at a time (monitor module: two-word). When comments are displayed : Up to eight devices can be displayed at a time (monitor module: one-word). Up to four devices can be displayed at a time (monitor module: two-word).					

*1: Indicates CC-Link connection (Intelligent device station).

*2: Indicates CC-Link connection (via G4).



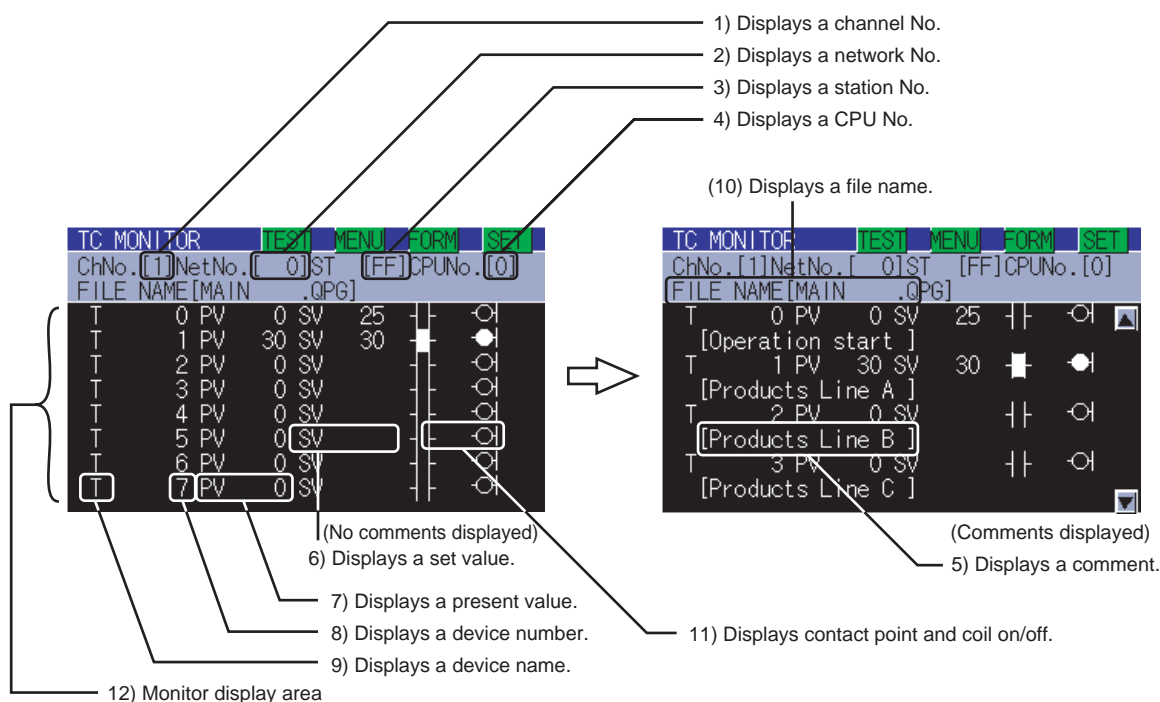
2.7 TC Monitor (Monitoring Timers and Counters)

The TC monitor is a function to monitor only timers (T) and counters (C).

This section describes how to operate the TC monitor when the system monitor function is executed.















2.7.1 Information displayed on the TC Monitor screen and key functions

- (1) The information displayed on the TC Monitor screen is described below.






For further information about items 1) to 12) shown above, see the page that follows.

(2) The following table describes the key functions displayed on the TC Monitor screen.

Key switch	Function
	Activates the Quick test operation.  Section 2.4.5 Quick test operation of monitor devices
	Switches the screen to the functional change menu screen to activate another monitor function or terminate the system monitor function.  Section 2.4.6 Changing screens
	Switches the screen to the display format switching screen to change the value display format (DEC/HEX) on the TC Monitor screen or comment/no-comment display.  Section 2.4.4 Switching the display format (DEC/HEX) and comment/no-comment display
	Switches the screen to the Device entry screen to enter or test monitor devices. <ul style="list-style-type: none"> · Entering monitor devices:  Section 2.4.2 Entering monitor devices (specifying monitor stations and devices) · Test operation:  Section 2.9 Test Operation · Canceling keywords:  Section 2.7.3 Procedure for canceling TC monitor keywords
 	Scroll displayed information upward or downward by a line to display the preceding or next monitor device that is not currently displayed. When five or more monitor devices are entered, these switches are available when their comments are displayed.  : Scrolls information upward by a line.  : Scrolls information downward by a line.

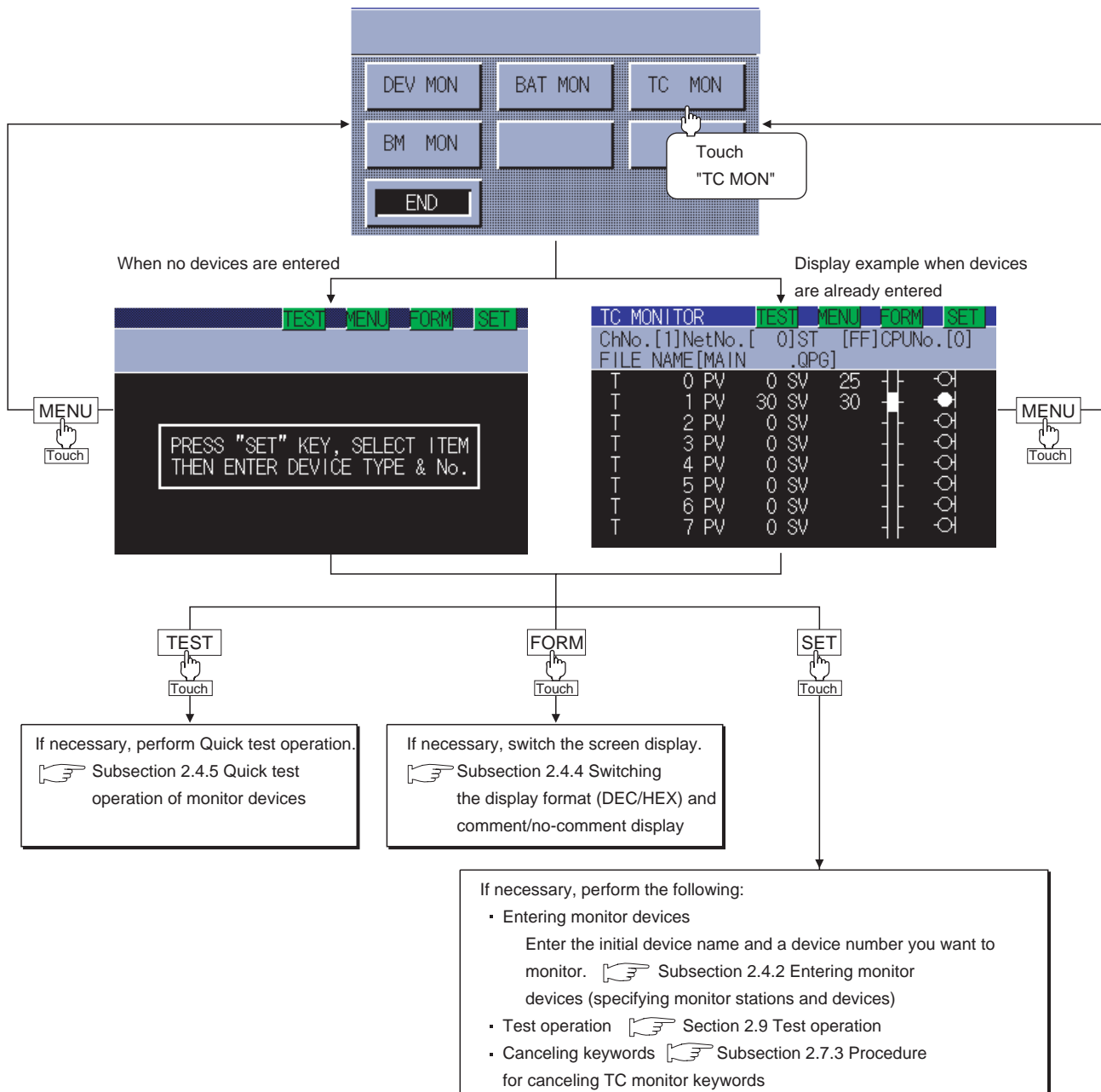
(3) The following table below describes the range of display of items 1) to 12) displayed.

No.	Item	Description of setting						
		Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	MELSECNET/H connection, MELSECNET/10 connection	CC-Link connection	
							ID*1	G4*2
1)	Channel No.	Sets the channel number of the controller targeted to the TC monitor.						
2)	Network No.	0			1 to 239	0: Host loop 1 to 255: Specified loop		0
3)	Station No.	FF			1 to 64	FF: When the host station is selected 0: When the control station is selected 1 to 64: When a normal station is selected		FF: When the host station is selected 0: When the master station is selected 1 to 64: When a local station is selected
4)	CPU No.	0 to 4: This item must be set only when the system is connected to multiple QCPUs. It is not necessary when the system is connected to another CPU.						
5)	Comment	Displays a comment (maximum number of characters: 16 one-byte characters). A comment is displayed when "DISPLAY" is selected for comment display on the display format switching screen.						
6)	Set value	[Decimal number] Four digits are displayed. (Display example: 1234) [Hexadecimal number] Four digits are displayed. (Display example: H AB12)						
7)	Present value	[Decimal number] Four digits are displayed. (Display example: 1234) [Hexadecimal number] Four digits are displayed. (Display example: H AB12) (Present values cannot be monitored when the CPU is an FXCPU.)						
8)	Device No.	Up to eight devices can be entered.						
9)	Device name	For further information about device numbers and names that can be entered:  GT Designer 2 Version <input type="checkbox"/> Screen Design Manual						
10)	File name	When the CPU is a QnACPU or QCPU : A program name will be displayed. When there are plural program names, the initial file name to be executed will be displayed. When the CPU is an ACPU or FXCPU : "MAIN PROGRAM" will always be displayed.						
11)	Contact point and coil on/off	 : On  : Off (When the CPU is an FXCPU, contact points and coils cannot be monitored.)						
12)	Monitor display area	When no comments are displayed : Up to eight devices can be displayed at a time. When comments are displayed : Up to four devices can be displayed at a time.						

*1: Indicates CC-Link connection (Intelligent device station).

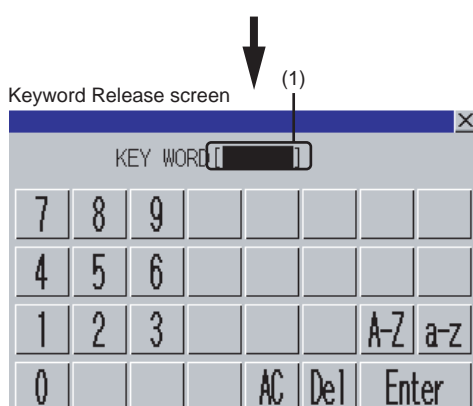
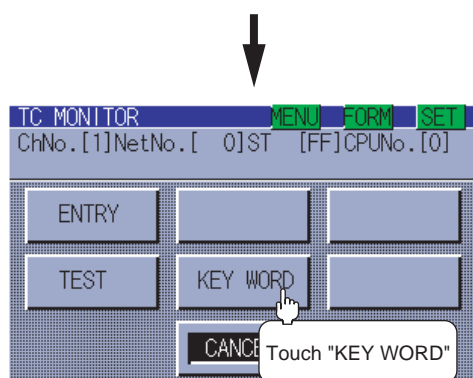
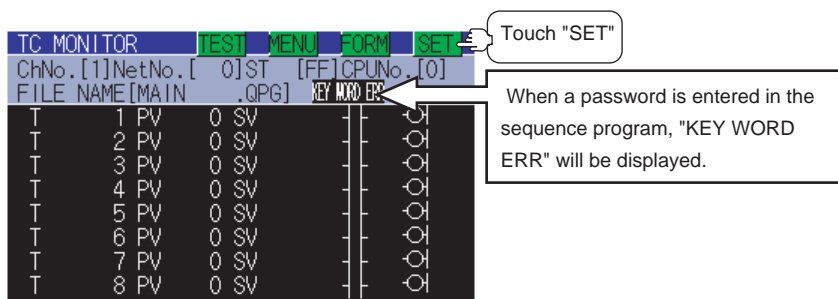
*2: Indicates CC-Link connection (via G4).

2.7.2 Procedure for TC monitor basic operation



2.7.3 Procedure for canceling TC monitor keywords

When the target controller is a QCPU and a password is entered in the sequence program, the keyword must be canceled to display the set values of timers and counters.
The procedure for canceling keywords is described below.



- 1 Enter the password entered in the sequence program at 1).
 - **A-Z** key : Touch this key to enter alphabetic characters A to Z (uppercase).
 - **a-z** key : Touch this key to enter alphabetic characters a to z (lowercase).
 - **0-9** key : Touch this key to enter numbers 1 to 9.
 - **Del** key : Use this key to delete an entered character.
 - **AC** key : Use this key to delete all characters under the cursor.
- 2 Entry is completed by touching the **Enter** key, and the keyboard closes.

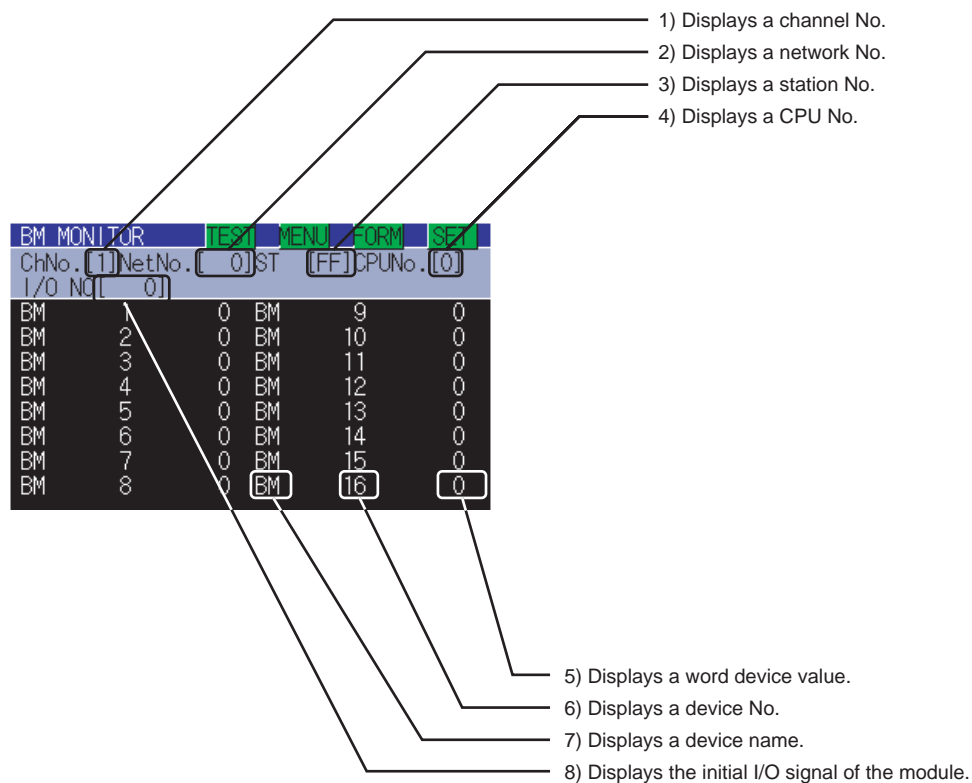
2.8 BM Monitor (Monitoring Buffer Memory)

The BM monitor (buffer memory monitor) is a function to monitor the buffer memory of special function modules.

This section describes how to operate the BM monitor when the system monitor function is executed.














2.8.1 Information displayed on the BM Monitor screen and key functions

(1) The information displayed on the BM Monitor screen is described below.




For further information about items 1) to 8) shown above, see the page that follows.

(2) The following table describes the key functions displayed on the BM Monitor screen.

Key switch	Function
	Activates the Quick test operation.  Section 2.4.5 Quick test operation of monitor devices
	Switches the screen to the functional change menu screen to activate another monitor function or terminate the system monitor function.  Section 2.4.6 Changing screens
	Switches the screen to the display format switching screen to change the value display format (DEC/HEX) on the BM Monitor screen or comment/no-comment display.  Section 2.4.4 Switching the display format (DEC/HEX) and comment/no-comment display
	Switches the screen to the Device entry screen to enter or test monitor devices. · Entering monitor devices:  Section 2.4.2 Entering monitor devices (specifying monitor stations and devices) · Test operation:  Section 2.9 Test Operation
 	Scroll displayed information upward or downward by a line to display the preceding or next monitor device that is not currently displayed. When five or more monitor devices are entered, these switches are available when their comments are displayed.  : Scrolls information upward by a line.  : Scrolls information downward by a line.

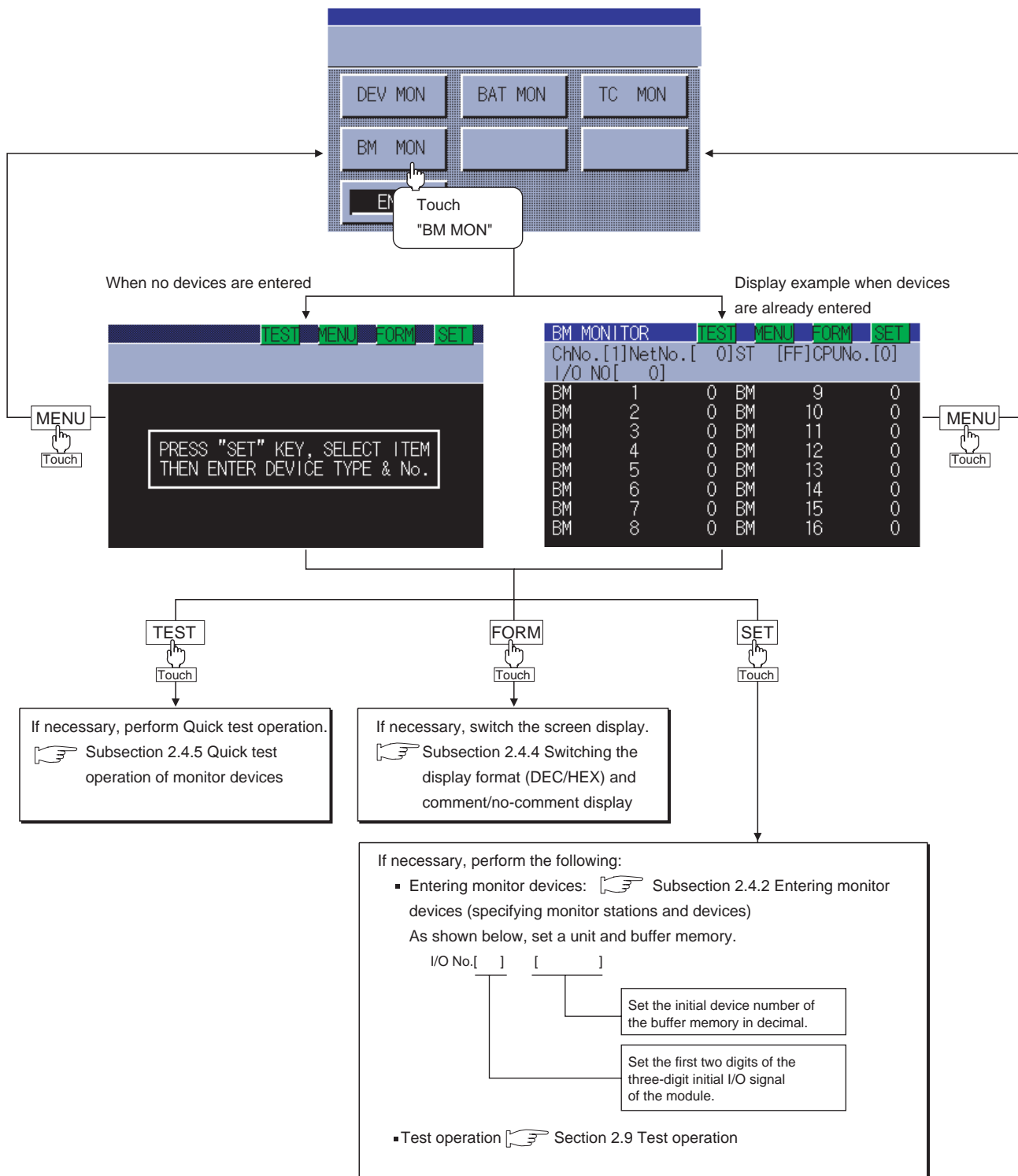
(3) The following table below describes the range of display of items 1) to 8) displayed.

No.	Item	Description of setting					
		Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	MELSECNET/H connection, MELSECNET/10 connection	CC-Link connection ID*1 G4*2
1)	Channel No.	Sets the channel number of the controller targeted to the BM monitor.					
2)	Network No.	0			1 to 239	0: Host loop 1 to 255: Specified loop	0
3)	Station No.	FF			1 to 64	FF: When the host station is selected 0: When the control station is selected 1 to 64: When a normal station is selected	FF: When the host station is selected 0: When the master station is selected 1 to 64: When a local station is selected
4)	CPU No.	0 to 4: This item must be set only when the system is connected to multiple QCPUs. It is not necessary when the system is connected to another CPU.					
5)	Word device value	[Decimal number] four digits (including a digit for a sign) are displayed. (Display example: 1234) [Hexadecimal number] four digits are displayed. (Display example: H AB12)					
6)	Device No.	Up to 16 devices can be entered. (When the CPU is an FXCPU, devices cannot be entered.)					
7)	Device name	For further information about device numbers and names that can be entered:  GT Designer 2 Version □ Screen Design Manual					
8)	Monitor display area	Up to 16 devices can be displayed at a time.					

*1: Indicates CC-Link connection (Intelligent device station).

*2: Indicates CC-Link connection (via G4).

2.8.2 Procedure for BM monitor basic operation



2.9 Test Operation

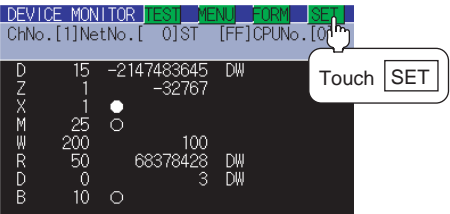
! Danger

- Before performing the quick test operations of the system monitor function (such as turning ON or OFF bit device, changing the word device current value, changing the settings or current values of the timer or counter, and changing the buffer memory current value), read through the manual carefully and make yourself familiar with the operation method.
During test operation, never change the data of the devices which are used to perform significant operation for the system.
False output or malfunction can cause an accident.

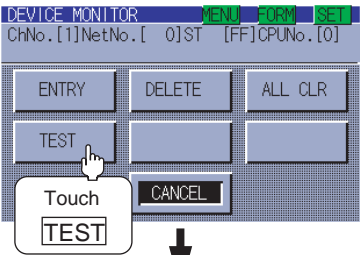
You can specify and test any station and device that can be monitored during monitoring by the system monitor function. This section describes how to test the bit or word devices of the controller or the buffer memory of the intelligent function unit.

2.9.1 Procedure for displaying the test menu screen and the setting key window screen

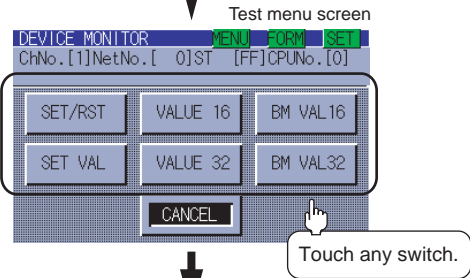
This subsection describes how to display the test menu screen and the setting key window screen.



- 1 Touch **[SET]**.
(When performing test operation from the Entry Monitor screen)



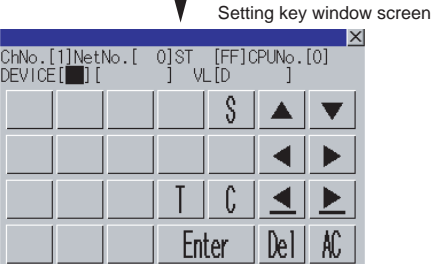
- 2 Touch **[TEST]**.



- 3 The test menu screen appears.
Touch **[SET/RST]**, **[SET VAL]**, **[VALUE 16]**, **[VALUE 32]**, **[BM VAL 16]** or **[BM VAL 32]**.

Operation example: touch **[SET VAL]**.
For a detailed description of each key function, see the following:

➡ Section 2.9.2 Information displayed on the test menu screen and key functions

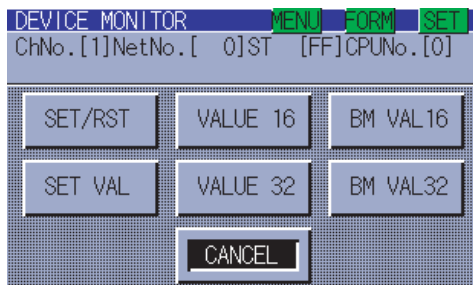


- 4 The setting key window screen appears.
Display example: set value operation screen of T (timer) and C (counter)
For further information about each setting key window, see the following:
➡ Section 2.9.2 Information displayed on the test menu screen and key functions
For further information about the test operation procedure, see the following:

➡ Section 2.9.4 Test operation procedure

2.9.2 Information displayed on the test menu screen and key functions

(1) Test menu screen



The table shown below describes the key functions.

Key	Function
	Switches the screen to the functional change menu screen to activate another monitor function or terminate the system monitor function. Section 2.4.6 Changing screens
	Switches the screen to the display format switching screen to change the value display format (DEC/HEX) or comment/no-comment display. Section 2.4.4 Switching the display format (DEC/HEX) and comment/no-comment display
	Switches the screen to the Device entry screen.
	Displays the screen for bit device on/off operation.
	Displays the Set value operation screen for T (timers) and C (counters).
	Displays the Present value operation screen for word devices. Data range: 16-bit (one-word) module
	Displays the Present value operation screen for word devices. Data range: 32-bit (two-word) module
	Displays the Present value operation screen for buffer memory. Data range: 16-bit (one-word) module
	Displays the Present value operation screen for buffer memory. Data range: 32-bit (two-word) module
	Terminates the test menu screen and displays each monitor screen.

2.9.3 Information and set items displayed on each setting key window screen

The information and set items on the setting key window screen to be used for each test are described below.

(1) Information displayed on each setting key window screen

SET/RST
Screen for bit device on/off operation

1) Displays a channel No.
2) Displays a network No.
3) Displays a station No.
4) Displays a CPU No.
5) Sets on/off
6) Sets a device number.
7) Sets a device name.

SET VAL
Set value operation screen for timers and counters

Displays whether decimal or hexadecimal is selected.
D: Decimal
H: Hexadecimal
8) Sets a T/C set value.

VALUE 16 **VALUE 32**
Present value operation screen for word devices
(16-bit (one-word) module/32-bit (two-word) module)


9) Sets the present value of a word device.

BM VAL 16 **BM VAL 32**
Present value operation screen for buffer memory
(16-bit (one-word) module/32-bit (two-word) module)

10) Sets the initial I/O signal of a module.
11) Sets the initial device number of the buffer memory.

(2) Set items on the setting key window screen

The table shown below describes details of the set items mentioned on the preceding page.

No.	Item	Description of setting						
		Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	MELSECNET/H connection, MELSECNET/10 connection	CC-Link connection	
							ID *1	G4 *2
1)	Channel No.	Sets the channel number of the controller targeted to the test operation.						
2)	Net No.	0			1 to 239	0: Host loop 1 to 255: Specified loop		0
3)	Station number	FF			1 to 64	FF: When the host station is selected 0: When the control station is selected 1 to 64: When a normal station is selected		FF: When the host station is selected 0: When the master station is selected 1 to 64: When a local station is selected
4)	CPU No.	0 to 4: This item must be set only when the system is connected to multiple QCPUs. It is not necessary when the system is connected to another CPU.						
5)	On/Off setting	Set "1": On, Set "0": Off						
6)	Device No.	For further information about device numbers and names that can be entered:  GT Designer 2 Version <input type="checkbox"/> Screen Design Manual						
7)	Device name							
8)	T/C set value	[Decimal number] 16-bit (one-word) module: Six digits (including a digit for a sign) are set. (Entry example: -12345) 32-bit (two-word) module: Ten digits (including a digit for a sign) are set. (Entry example: -123456789) [D] displayed in the number entry box indicates that the entry is decimal. [Hexadecimal number] 16-bit (one-word) module: Four digits are set. (Entry example: H AB12) 32-bit (two-word) module: Eight digits are set. (Entry example: H ABCDE123) [H] displayed in the number entry box indicates that the entry is hexadecimal.						
9)	Word device present value	[Decimal number] 16-bit (one-word) module: Six digits (including a digit for a sign) are set. (Entry example: -12345) 32-bit (two-word) module: Ten digits (including a digit for a sign) are set. (Entry example: -123456789) [D] displayed in the number entry box indicates that the entry is decimal. [Hexadecimal number] 16-bit (one-word) module: Four digits are set. (Entry example: H AB12) 32-bit (two-word) module: Eight digits are set. (Entry example: H ABCDE123) [H] displayed in the number entry box indicates that the entry is hexadecimal.						
10)	Initial I/O signal of module	Set the first two digits of the three-digit initial I/O signal of the module.						
11)	Initial device number of buffer memory	Set the number in a decimal number.						

*1: Indicates CC-Link connection (Intelligent device station).

*2: Indicates CC-Link connection (via G4).

2.9.4 Test operation procedure

Test operation takes place by setting on the setting key window screen the name and number of a device, initial device number of the buffer memory, and the initial I/O of the module or entering change values. This subsection takes a change of set values as an example to describe the test operation procedure.

- 1 Touch the **SET VAL** key on the test menu screen.

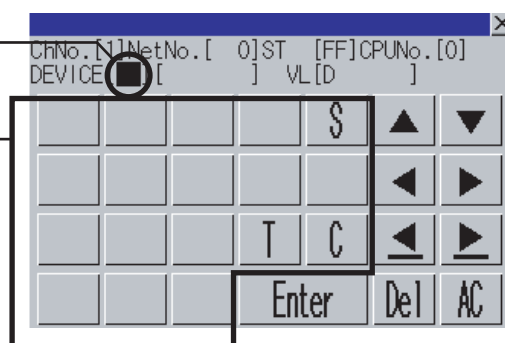
The setting key window screen appears.

- 2 Using the **◀** and **▶** keys, move the cursor to the item you want to set.

The keyboard displayed depends on the position of the cursor, as shown below.

The position of the cursor displayed

Keyboard displayed when the cursor is placed in the device name box



Keyboard displayed when the cursor is placed in the device number box



- 3 If necessary, enter numbers or characters on the keyboard.
 - **Del** key: Use the **Del** key to delete an entered character.
 - **AC** key: Use the **AC** key to delete all characters under the cursor.
 - The **▲/▼** and the keys on which nothing is displayed are not available.
 - For further information about the setting ranges, see the following:
☞ Section 2.9.3 Information and set items displayed on each setting key window screen
- 4 Entry is completed by touching the **Enter** key.
- 5 The keyboard closes by touching the **✕** key.

Operating the set values of timers and counters

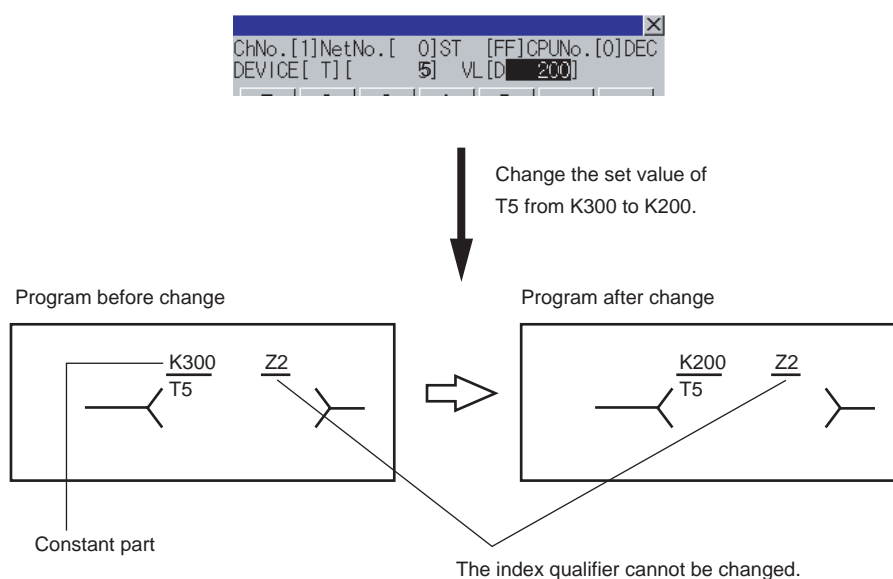
(1) Time-up/Count-up status

Even if a set value or present value is changed after a timer or counter is up, the time-up or count-up status does not change. The present status is retained.

(2) Changing an index qualifier

Only the constant part of a T/C set value with a qualifier can be changed. The index qualifier cannot be changed.

(Example) Change the set value of T5 from 300 to 200.



(3) Operation when a password is entered for the controller

When the target controller is a QCPU, the Keyword Release screen appears. Enter the password.

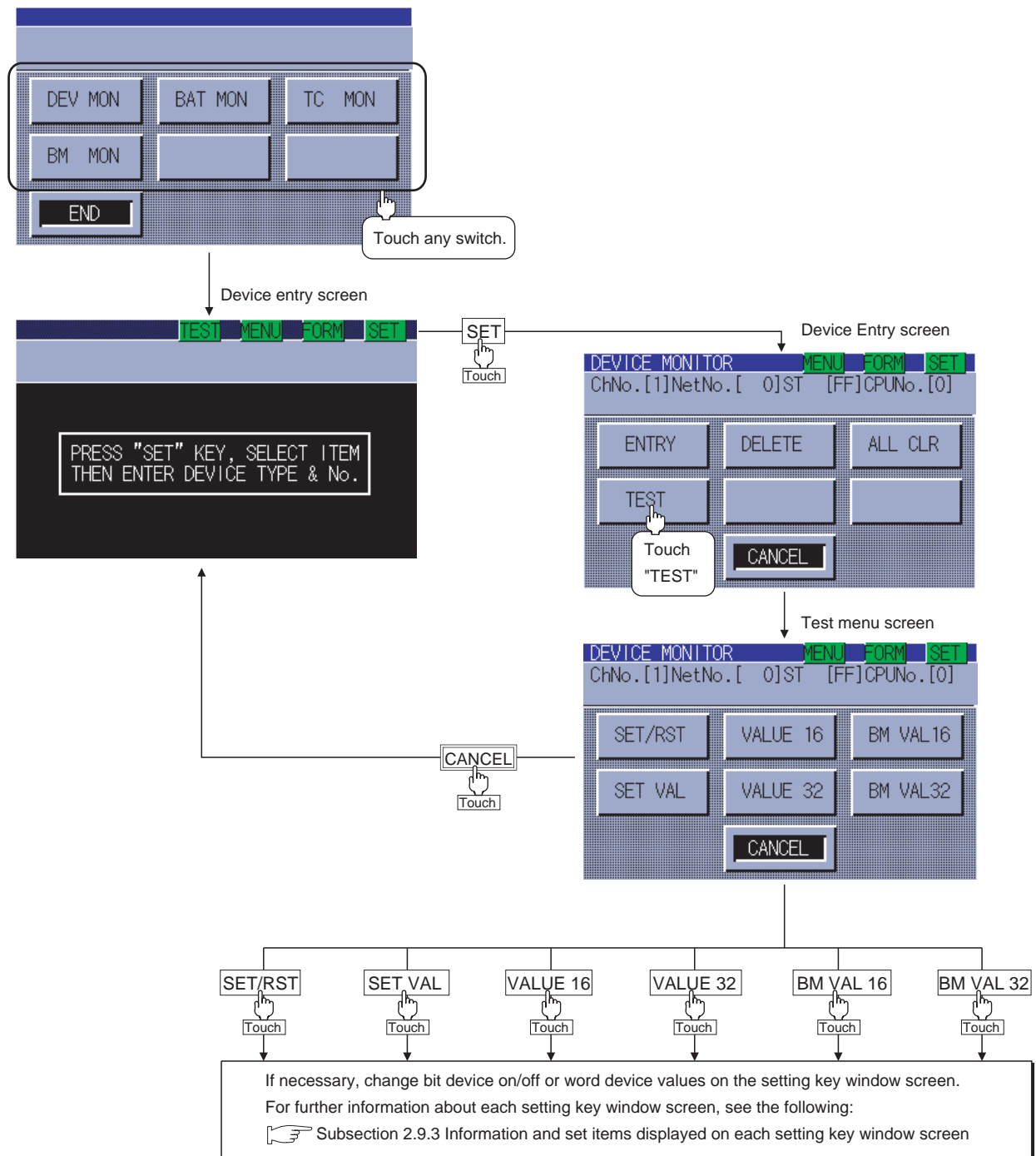


1) Enter the password entered in the sequence program at 1).

- **[A-Z]** key : Touch this key to enter alphabetic characters A to Z (uppercase).
- **[a-z]** key : Touch this key to enter alphabetic characters a to z (lowercase).
- **[0-9]** key : Touch this key to enter numbers 1 to 9.
- **[Del]** key : Use this key to delete an entered character.
- **[AC]** key : Use this key to delete all characters under the cursor.


2) Entry is completed by touching the **[Enter]** key, and the keyboard closes.

2.9.5 Test operation basic procedure



2.10 Error Messages and Corrective Action

This section describes the error messages displayed when the system monitor function is executed, and corrective action.

Error message	Description	Corrective action
PLC communications error	Communication could not be established with the PLC CPU.	<ul style="list-style-type: none">(1) Connections between the PLC CPU and the GOT (disconnected or cut cables).(2) Has an error occurred in the PLC CPU?(3) Refer to the following manual for confirming whether the error has occurred in network.  <ul style="list-style-type: none">GT16 User's ManualGT15 User's ManualGT11 User's Manual

3. LADDER MONITOR FUNCTION



3.1 Features

The ladder monitor enables you to monitor the sequence program within the target controller and change device values.

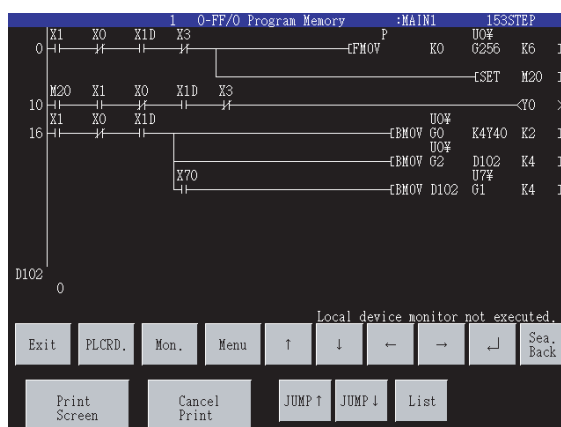
It is intended to troubleshoot and maintain the PLC system efficiently.

The features of the ladder monitor are shown below.

1 The program with ladder symbols can be monitored

You can monitor PLC CPU programs in ladder diagram format and save displayed screens in BMP or JPEG format. (☞ Section 3.4 Operation Procedure Common)

(Display example)

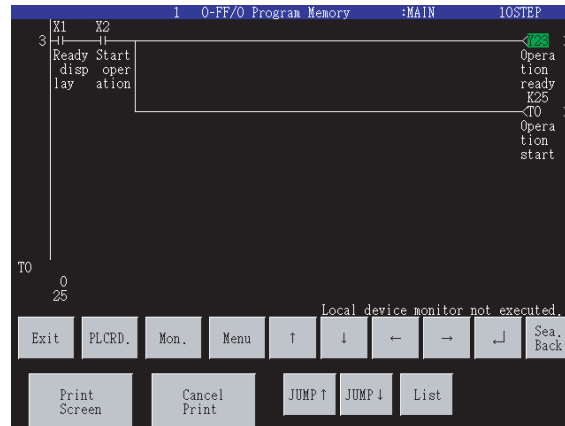


2 The display format, device comment display and language can be switched

The following can be switched. (☞ Section 3.5 Switching the Display Format)

- Display format of device values, timer and counter values
- Comment display/non-display of the target device
- Language used for items of the sequence program such as file name and comments

(Display example)



(1) Switching the display format

The present value of a word device is displayed in a decimal of hexadecimal number in the lower area of the screen.

(☞ Subsection 3.5.2 Display switching of decimal numbers/hexadecimal numbers)

(2) Device comment display

Comments of the devices used in the sequence program (comments written in the controller) are displayed.

(☞ Subsection 3.5.3 Switching comment/no-comment display)

Comment file data stored in a CF card can also be displayed when the MELSEC-Q/QnA ladder monitor is used. (Subsection 3.3.5 Reading comment files from CF cards)

(3) Language switching (for MELSEC-Q/QnA ladder monitor only)

In the MELSEC-Q/QnA ladder monitor, language switching (Japanese/Korean) is available for displaying the following items of a sequence program.

(To switch the language, register the following items with the language (Japanese/Korean) used for the PLC READING DATA DISPLAY. To display Korean, for example, register the following items with Korean on GX Developer.)

- File name
- Title
- Comment
- Note
- Statement


Items other than the above (such as menu) are displayed with the language set on [GOT setup].

(☞ Section 3.5.7 Language switching of the sequence program (MELSEC-Q/QnA ladder monitor))

3 Other stations can be monitored

You can use the ladder monitor on other station in the data link system containing the GOT (or GOT-connected station), network system or CC-Link system.

For further information about the connection forms available for the ladder monitor, see the following:

 Subsection 3.2.1 System configuration

4 Enhanced interaction with objects

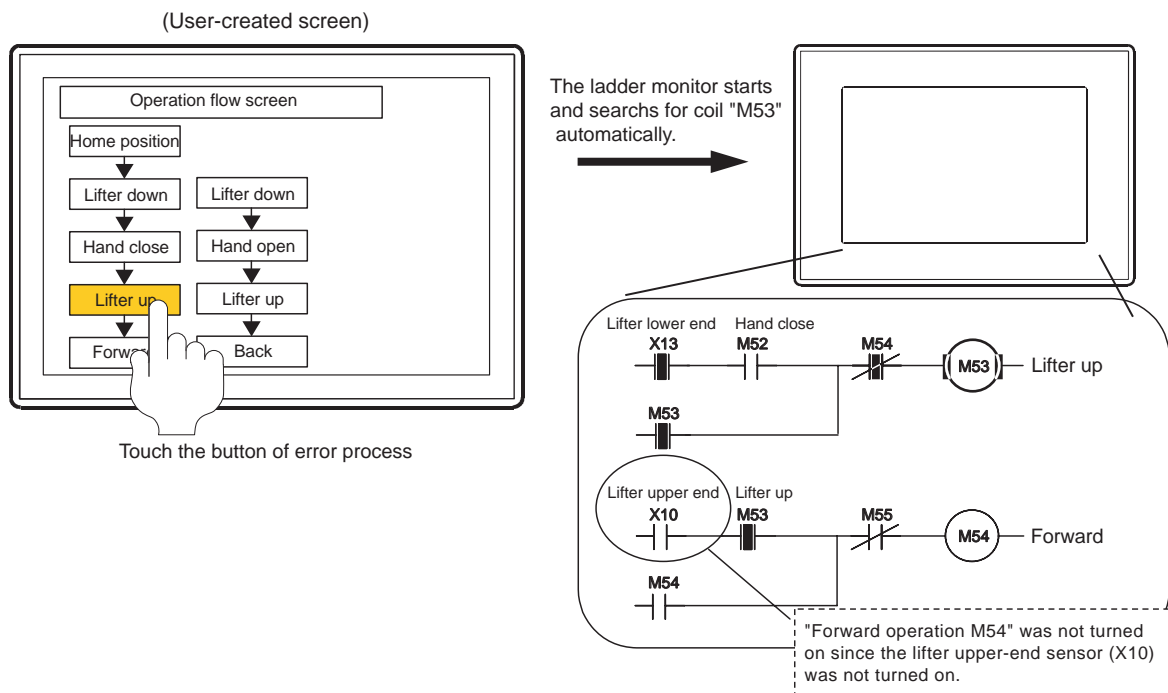
(1) One-touch ladder jump function

Only by touching an object on a user-created screen, a target device can be searched and displayed.

In addition, in the case of the Q/QnA ladder monitor, searching is performed only when the monitor target of the sequence program that has been read and the monitor target that is set on the object match, enabling more accurate search.

Even a person who is not the operator familiar with the equipment inside can trace the source of the equipment error without fail by simple operations, reducing time to stop the error.

Example) Coil searching by touching a touch switch



(2) Real-time program searching from advanced alarm display, touch switch (for the Q/QnA ladder monitor only)

PLC data can be read automatically and programs to be read can be specified.

When a Japanese or English file name is specified, the corresponding program can be read.

Accordingly, the specified program can be read to be searched and the search result is displayed on the monitor screen by a simple operation as selecting a displayed alarm and then touch the key code switch.

5 Multiple files can be read

By reading multiple PLC CPU files in advance, reading of another program from the PLC CPU is not needed every time the program display is switched, and comment display can be switched automatically.

This enables more efficient ladder monitoring, reducing the operation time.

3.2 Specifications

3.2.1 System configuration

This section describes the system configuration of the ladder monitor.
For connection type settings and precautions regarding the communication unit/cable and connection type, see the following manual.

 GOT1000 Series Connection Manual

1

Target controller

Controller
QCPU (Q mode)
QSCPU*1
QnACPU
ACPU/QCPU (A mode), Motion controller (A Series)*2
FXCPU*3
CNC (C70, C6/C64)*4

- *1 The GOT cannot write data to devices in the QSCPU.
- *2 Monitoring is not possible when the target CPU is a motion controller (Q series).
- *3 The ladder monitor is not applicable to the FX3G.
- *4 Use the function version A2 or later.

2 Connection type

(1) When the GOT is connected to a QCPU (Q mode) or a QSCPU

(○: Available, △: Partly restricted, ✕: Unavailable)

Function		Connection type between GOT and controller							Reference section
Name	Description	Bus connection *6	Direct CPU connection *6	Computer link connection *6	Ethernet connection	MELSEC NET/H connection, MELSEC NET/10 connection	CC-Link IE ^{*3}	CC-Link connection ID ^{*4*6} G4 ^{*5*6}	
Search operation	Device search, defect search, etc.	○			○	△ ^{*1}	○	○	3.6
Display switching	Displaying word devices in DEC or HEX	○			○	△ ^{*1}	○	○	3.5
	Displaying device comments, etc.	○			○	△ ^{*1}	○	○	
Test operation	Changing device values, etc.	△ ^{*2}			○	△ ^{*1*2}	○	△ ^{*2}	3.7
Local device monitor	Monitoring local devices	○			○	△ ^{*1}	○	○	3.8
Hard copy	Storing ladder monitor screen in BMP/JPEG format or printing it with a printer	○			○	△ ^{*1}	○	○	3.4.2

*1 For the MELSECNET/10 connection, use a QCPU and network module (QJ71LP21, QJ71LP21-25, QJ71LP21S-25, and QJ71BR11) with the function version B or later.

*2 The present value of Z cannot be changed. V cannot be turned ON or OFF.

*3 Indicates the CC-Link IE controller network connection.

*4 Indicates CC-Link connection (Intelligent device station).

*5 Indicates CC-Link connection (via G4).

*6 The QSCPU does not support the connection type.

(2) When the GOT is connected to a QnACPU

(○: Available, △: Partly restricted, ✕: Unavailable)

Function		Connection form between GOT and controller						Reference section	
Name	Description	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	MELSEC NET/10 connection	CC-Link connection		
							ID*2		G4*3
Search operation	Device search, defect search, etc.	○			○	○	○	×	3.6
Display switching	Displaying word devices in DEC or HEX	○			○	○	○	×	3.5
	Displaying device comments, etc.	○			○	○	○	×	
Test operation	Changing device values, etc.	△ *1			○	△ *1	△ *1	×	3.7
Local device monitor	Monitoring local devices	×			×	×	×	×	-
Hard copy	Storing ladder monitor screen in BMP/JPEG format or printing it with a printer	○			○	○	○	×	3.4.2

*1 The present value of Z cannot be changed. V cannot be turned on or off.

*2 Indicates CC-Link connection (Intelligent device station).

*3 Indicates CC-Link connection (via G4).

(3) When the GOT is connected to an ACPU/QCPU (A mode) and an A series motion controller CPU

(○: Available, △: Partly restricted, ×: Unavailable)

Function		Connection form between GOT and controller						Reference section	
Name	Description	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	MELSEC NET/10 connection	CC-Link connection		
							ID*4		G4*5
Search operation	Device search, defect search, etc.	○		△*3	○	○	○	×	3.6
Display switching*1	Displaying word devices in DEC or HEX				○	○	○	×	3.5
	Displaying device comments, etc.				○	○	○	×	
Test operation	Changing device values, etc.	△*2			○	△*2	△*2	×	3.7
Hard copy	Storing ladder monitor screen in BMP/JPEG format or printing it with a printer	○			○	○	○	×	3.4.2

*1 If the total capacity of parameters, sequence programs, T/C set values, comments, and extension comments is 144 Kbytes or over, comments cannot be correctly displayed.

*2 The present value of V and Z cannot be changed.

*3 Subprograms 2 and 3 of the A4UCPU (in computer link connection) cannot be ladder-monitored.

*4 Indicates CC-Link connection (Intelligent device station).

*5 Indicates CC-Link connection (via G4).

(4) When the GOT is connected to an FXCPU

(○: Available, △: Partly restricted, ×: Unavailable)

Function		Connection form between GOT and controller	Reference section
Name	Description	Direct CPU connection	
Search operation	Device search, defect search, etc.	○	3.6
Display switching	Displaying word devices in DEC or HEX	○	3.5
	Displaying device comments, etc.	○	
Test operation	Changing device values, etc.	△ ^{*1*2}	3.7
Hard copy	Storing ladder monitor screen in BMP/JPEG format or printing it with a printer	○	3.4.2

*1 The present value of V and Z cannot be changed.

*2 The set values of T and C cannot be changed.

(5) When the GOT is connected to a CNC

(a) When the GOT is connected to a CNC C70

(○: Available, △: Partly restricted, ✕: Unavailable)

Function		Connection form between GOT and controller							Reference section
Name	Description	Bus connection	Direct CPU connection ^{*1}	Computer link connection	Ethernet connection ^{*4}	MELSEC NET/10 connection	CC-Link IE ^{*5}	CC-Link connection ID ^{*6} G4 ^{*7}	
Search operation	Device search, defect search, etc.		○		○	△ ^{*2}	○	○ ○	3.6
Display switching	Displaying word devices in DEC or HEX		○		○	△ ^{*2}	○	○ ○	3.5
	Displaying device comments, etc.		○		✕	△ ^{*2}	○	○ ○	
Test operation	Changing device values, etc.		△ ^{*3}		○	△ ^{*2 *3}	○	△ ^{*3} ○	3.7
Hard copy	Storing ladder monitor screen in BMP/JPEG format or printing it with a printer		○		○	△ ^{*2}	○	○ ○	3.4.2

*1 Available with the multiple CPU system including a QCPU (Q mode).

*2 For the MELSECNET/10 connection, use a QCPU and network module (QJ71LP21, QJ71LP21-25, QJ71LP21S-25, and QJ71BR11) with the function version B or later.

*3 The present value of Z cannot be changed. V cannot be turned ON or OFF.

*4 Available with the Display I/F connection only.

*5 Indicates the CC-Link IE controller network connection.

*6 Indicates CC-Link connection (Intelligent device station).

*7 Indicates CC-Link connection (via G4).

(b) When the GOT is connected to a MELDAS C6/C64

(○: Available, △: Partly restricted, ✕: Unavailable)

Function		Connection form between GOT and controller							Reference section
Name	Description	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	MELSEC NET/10 connection	CC-Link connection		
							ID ^{*4}	G4 ^{*5}	
Search operation	Device search, defect search, etc.	×	○	×	○	○ ^{*1}	○	×	3.6
Display switching ^{*1}	Displaying word devices in DEC or HEX	×	○	×	○	○ ^{*1}	○	×	3.5
	Displaying device comments, etc.	×	○	×	○	○	○	×	
Test operation	Changing device values, etc.	×	△ ^{*2 *3}	×	△ ^{*2 *3}	△ ^{*1 *2 *3}	△ ^{*2 *3}	×	3.7
Hard copy	Storing ladder monitor screen in BMP/JPEG format or printing it with a printer	×	○	×	○	○ ^{*1}	○	×	3.4.2

*1 For the MELSECNET/10 connection, use a QCPU and network module (QJ71LP21, QJ71LP21-25, QJ71LP21S-25, and QJ71BR11) with the function version B or later.

*2 The present value of Z cannot be changed. V cannot be turned ON or OFF.

*3 The set values of T and C cannot be changed.

*4 Indicates CC-Link connection (Intelligent device station).

*5 Indicates CC-Link connection (via G4).

3 Required option OS' and option function boards

The option function OS' and option function boards shown in the table below are required.

Option OS	OS memory space (user area)			Option function board	
	GT16		GT15	GT16	GT15
	Built-in flash memory (ROM)	User memory (RAM)			
Ladder monitor for MELSEC-A	342KB	674KB	523KB	Not required	GT15-FNB, GT15-QFNB16M, GT15-QFNB32M, GT15-QFNB48M, GT15-MESB48M
Ladder monitor for MELSEC-FX	342KB	674KB	592KB	Not required	GT15-QFNB, GT15-QFNB16M, GT15-QFNB32M, GT15-QFNB48M, GT15-MESB48M
Ladder monitor for MELSEC-Q/QnA	590KB	4170KB	1082KB	Not required	GT15-QFNB, GT15-QFNB16M, GT15-QFNB32M, GT15-QFNB48M, GT15-MESB48M

(1) Option OS

Install the option OS in the above table to the GOT.

Refer to the following manual for the procedure for installing the option OS.

 GT Designer2 Version □ Basic Operation/Data Transfer Manual (8. TRANSFERRING DATA)

(2) OS memory space

The available memory space shown in the table above is required in the user area to install the option OS to the GOT.

Refer to the following manual for the procedure for checking the available memory space of the user area and information about the data using other user areas.

 GT Designer2 Version □ Basic Operation/Data Transfer Manual (8. TRANSFERRING DATA)

(3) Option function board

(a) For GT16

No option function board is required.


(b) For GT15

Mount one of the option function boards in the above table on the GOT.

For the GOTs with a built-in option function board, refer to the following.

 1.1.2 Hardware and OS' required for each function

For how to mount an option function board on the GOT, refer to the following manual.

 GT15 User's Manual (8.10 Option Function Board)

4 Display screen for the ladder monitor

A sequence program of up to 8 lines (one line: up to 11 contacts (12 or more contacts will be looped back)) is displayed on a single screen.

In addition, the current values of up to 8 word devices (9 or more devices are displayed by switching the display with the arrow key) etc. are displayed.

For the GT1695M-X, GT1685M-S, GT1595-X, GT1585V-S, GT1585-S, GT1575V-S, or GT1575-S, the MELSEC-Q/QnA ladder monitor displays a sequence program of up to 15 lines (one line: up to 11 contacts (12 or more contacts will be looped back)) on a single screen.

3.2.2 Devices and range that can be monitored

(1) MELSEC-A ladder monitor

(○: Possible, ✕: Impossible)

Device	Device range	Ladder display	Device monitor display	Search operation
Input	X000 to XFFF (hexadecimal)	○	○	○
Output	Y000 to YFFF (hexadecimal)	○	○	○
Internal relay	M0 to M8191	○	○	○
Latch relay	L0 to L8191			
Step relay	S0 to S8191			
Special internet relay	M9000 to M9255	○	○	○
Link relay	B0000 to B1FFF (hexadecimal)	○	○	○
Timer	T0 to T2047	○	○	○
Counter	C0 to C1023	○	○	○
Data register	D0 to D8191	○	○	○
Special data register	D9000 to D9255	○	○	○
Link register	W0000 to W1FFF (hexadecimal)	○	○	○
Annunciator	F0 to F2047	○	○	○
File register	R0 to R8191	○	○	○
Accumulator	A0 to A1	○	○	○
Index register	V to V1 to V6	○	○	○
Index register	Z to Z1 to Z6	○	○	○
Nesting	N0 to N7	○	✕	✕
Pointer	P0 to P255	○	✕	✕
Interrupt pointer	I0 to I31	○	✕	✕

(2) MELSEC-FX ladder monitor

(○: Possible, ✕: Impossible)

Device	Device range	Ladder display	Device monitor display	Search operation
Input	X000 to X337 (octadecimal)	○	○	○
Output	Y000 to Y337 (octadecimal)	○	○	○
Auxiliary relay	M0 to M8511	○	○	○
State	S0 to S4095	○	○	○
Timer contact	T0 to T511	○	○	○
Counter contact	C0 to C255	○	○	○
Data register	D0 to D8511	○	○	○
Index register	V0 to V7	○	○	○
Index register	Z0 to Z7	○	○	○
Nesting	N0 to N7	○	✕	✕
Pointer	P0 to P4095	○	✕	✕
Interrupt pointer	I00* to I30* (four points) : Fx0 I00* to I50* (six points) : Fx1, Fx2 I6** to I8** (three points) : Fx1, Fx2 I010 to I060 (six points) : Fx1, Fx2	○	✕	✕
Extension register	R0 to R32767	○	○	○

(3) MELSEC-Q/QnA ladder monitor

(○: Possible, ✕: Impossible)

Device	Device range	Ladder display	Device monitor display	Search operation
Input	X0 to 1FFF, DX0 to 1FFF	○	○	○
Output	Y0 to 1FFF, DY0 to 1FFF	○	○	○
Internal relay	M0 to 32767	○	○	○
Latch relay	L0 to 8191	○	○	○
Link relay	B0 to 7FFF	○	○	○
Timer	T0 to 2047	○	○	○
Retentive timer	ST0 to 2047	○	○	○
Counter	C0 to 1023	○	○	○
Data register	D0 to 12287	○	○	○
Link register	W0 to 1FFF	○	○	○
Annunciator	F0 to 2047	○	○	○
Edge relay	V0 to 2047	○	✕	○
File register	R0 to 32767	○	○	○
	ZR0 to 32767	○	○	○
	ZR32768 to 4184063	○	○	✕
Extended data register	D0 to 32767	○	○	○ ^{*1}
Extended link register	W0 to 7FFF	○	○	○ ^{*1}
Link special relay	SB0 to 7FF	○	○	○
Link special register	SW0 to 7FF	○	○	○
Step relay	S0 to 8191	○	○	○
Index register	Z0 to 15	○	○	○
	Z16 to 19	○	○	○ ^{*1}
	ZZ0 to 18	○	✕	○ ^{*2}
Special relay	SM0 to 2047	○	○	○
Special data register	SD0 to 2047	○	○	○
Function input	FX0 to F	○	✕	○
Function output	FY0 to F	○	✕	○
Function register	FD0 to 4	○	✕	○
Link direct device	J □ □ ¥ □ □	○	✕	✕
Intelligent function module	U □ □ ¥ □ □	○	✕	✕
	U3En □ □ ¥ □ □			
Nesting	N0 to 14	○	✕	✕
Pointer	P0 to 4095	○	✕	✕
Interrupt pointer	I0 to 255	○	✕	✕
SFC block device	BL0 to 319	○	✕	○
SFC transition device	TR0 to 511	○	✕	○
Network No. device	J0 to 255	○	✕	✕
I/O No. device	U0 to FF	○	✕	✕
	3E0 to 3E3			
Macro registration device	VD0 to	○	✕	✕

*1 For searching devices with the menu for the ladder monitor, the device number cannot be specified.

*2 Search ZZ by specifying Z. (For searching ZZ0, specify Z0. For searching ZZ1, specify Z1.)

ZZ0 is not searched by specifying Z1.

When a sequence program has Z and ZZ, specifying Z searches both Z and ZZ.

3.2.3 Access range

With Universal model QCPU, the GOT can monitor up to 64 stations.

The access range other than the above is the same as the access range when the GOT is connected to a controller.

Refer to the following manual for details of the access range.

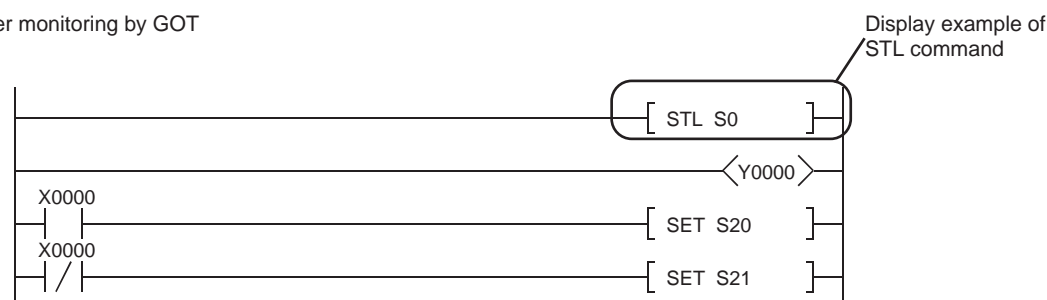


GT Designer2 Version □ Screen Design Manual (2.7 Controllers that can be monitored and the Access Range)

3.2.4 Precautions

- (1) GOT to be used
The ladder monitor cannot be used with the GT1555-Q and GT1550-Q.
- (2) Precautions to be taken while the ladder monitor is activated
While the ladder monitor is activated, do not perform the following for the GOT.
Otherwise, the stored data may be deleted or the ladder monitor may not operate normally.
 - Turning the CF card access switch (ON, OFF)
 - Installing/removing the CF card
- (3) Ladder display
Up to 24 lines can be displayed per ladder block.
If a sequence program is written in which 24 or more lines are used in a ladder block, the ladder cannot be correctly displayed. It is advisable to divide such programs.
- (4) When the system is connected to an FXCPU
 - (a) During PLC reading, only the host station is read.
 - (b) An STL (step ladder) command, a dedicated command for the FXCPU, is displayed as shown below.

Ladder monitoring by GOT



- (c) How an INV command is displayed

Ladder monitoring by GOT



- (d) When searching an STL command, use "S (state)" in a device search.
- (e) The 32-bit counters are displayed in 32-bit fixed display in the device monitor.
- (f) When using FX3U(C), if the memory capacity is set to 32,000 or higher with the GX Developer PLC parameters, sequence programs cannot be displayed.
When displaying a sequence program with the GOT, set the memory capacity to 16,000 or less.

- (g) Changes to T/C set values are reflected on the ladder monitor display only when they are made with the system monitor or test function.
When a value is changed by numerical input or other object, the change is reflected on the display after the GOT is restarted.
- (5) When reading multiple files
- (a) Continuous searching in multiple sequence programs is allowed only for device search, contact search, coil search, and touch search.
 - (b) For searching in multiple sequence programs, the GOT can display search results of the previously searched program by touching the Sea.
Back key.
The GOT cannot display search results of multiple programs on one screen.
When programs are switched, the currently displayed search results of the program disappear from the screen.
 - (c) For returning to the search results of the previously searched program by touching the Sea.
Back key during searching in multiple sequence programs, the touch operation is canceled when the previously searched program is deleted.
 - (d) For defect search, when multiple sequence programs have been read, searching is performed continuously in the program that is searched and displayed first.
Continuous searching in multiple programs is not performed.
 - (e) Automatic reading and searching of a specified sequence program is allowed only for the special function switch and advanced alarm display.
 - (f) If the monitor target is changed to another PLC, all the files that have been stored in the drive of the GOT are deleted when data are read from the PLC.
 - (g) Without changing the monitor target PLC CPU, files stored in the drive of the GOT will not be deleted by changing the read target drive.
When all files are read from the monitor target PLC CPU with the automatic PLC read setting made, therefore, the programs to be searched and the monitor target programs may not match.
In such a case, delete unnecessary files on the file list window.
 - (h) Up to 512 files of ladder data including those displayed on the GOT (up to 3 files) can be stored in the storage destination drive.
When 511 files of ladder data are stored and another ladder data is displayed on the GOT, therefore, storing a new ladder data is not allowed.
- (6) Reading comment files
- (a) Comment data can be read from a CF card only with the MELSEC-Q/QnA ladder monitor.
 - (b) Only files with the file names (program names) with one-byte alphanumeric characters are applicable to the GOT.
When project data are created on GX Developer, use only one-byte alphanumeric characters for file names (program names).
 - (c) When the data save location is set to [None], save only one comment file in a CF card.
Multiple comment files cannot be read.

(7) Monitoring local devices

- (a) When a sequence program stored in a PLC CPU is changed, be sure to read the program with the GOT.

When the sequence program in the PLC CPU is changed after reading the sequence program with the GOT, the GOT may not correctly monitor local devices.

- (b) For monitoring local devices, do not monitor the same local device in the same PLC CPU simultaneously with multiple GOTs and GX Developer.
- (c) When the same local device in the same PLC CPU is simultaneously monitored with multiple GOTs and GX Developer, the GOT cannot correctly monitor the devices.

(8) Changing set values of timer and counter when monitoring multiple programs

For monitoring multiple programs, set values of all the target programs can be changed by switching displayed programs when the test menu screen is opened from the ladder monitor screen.



Reflecting value changes in display of ladder monitor screen

For opening the test menu screen from the system monitor screen or user-created screen, even if the set values of the timer and counter are changed, the changed values are not reflected in the display of the ladder monitor screen.

For reflecting the changed values in the display of the ladder monitor screen, read the program again.

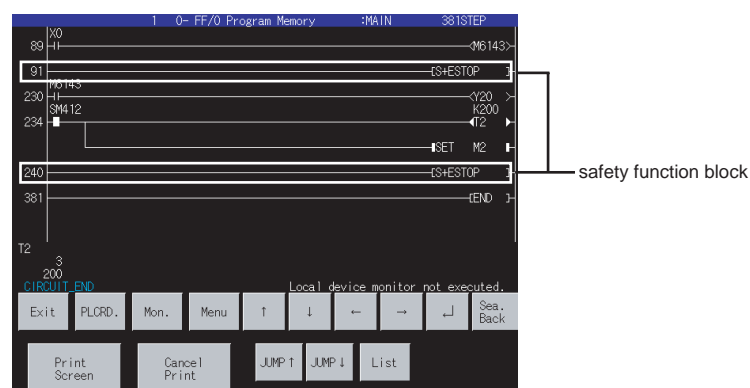
(9) Precautions for Universal model QCPU

Even though Universal model QCPU processes 64-bit data, the GOT cannot monitor the 64-bit data.

(10) Precautions for QSCPU

- (a) The GOT cannot write data to the devices in the QSCPU.
- (b) For a safety function block, only the FB definition name is displayed in the application instruction format.

The program in the safety function block is not displayed.



- (c) The following shows the GOT operation when the program in a safety function block has the target of the search operation.

Search operation	GOT operation
Device search Contact point search Coil search	The GOT adds and displays the ladder block that shows the FB definition name in the application instruction format in the last row. For the continuous search, when the program in the safety function block has multiple target devices, the ladder block is added to the last row only one time.
Step search	The GOT displays the ladder block that shows the FB definition name in the application instruction format corresponding to the searched step.
Defect search	The GOT adds and displays the ladder block that shows the FB definition name in the application instruction format in the last row and ends the defect search. (The operation is the same as that when all the defective devices are searched.)

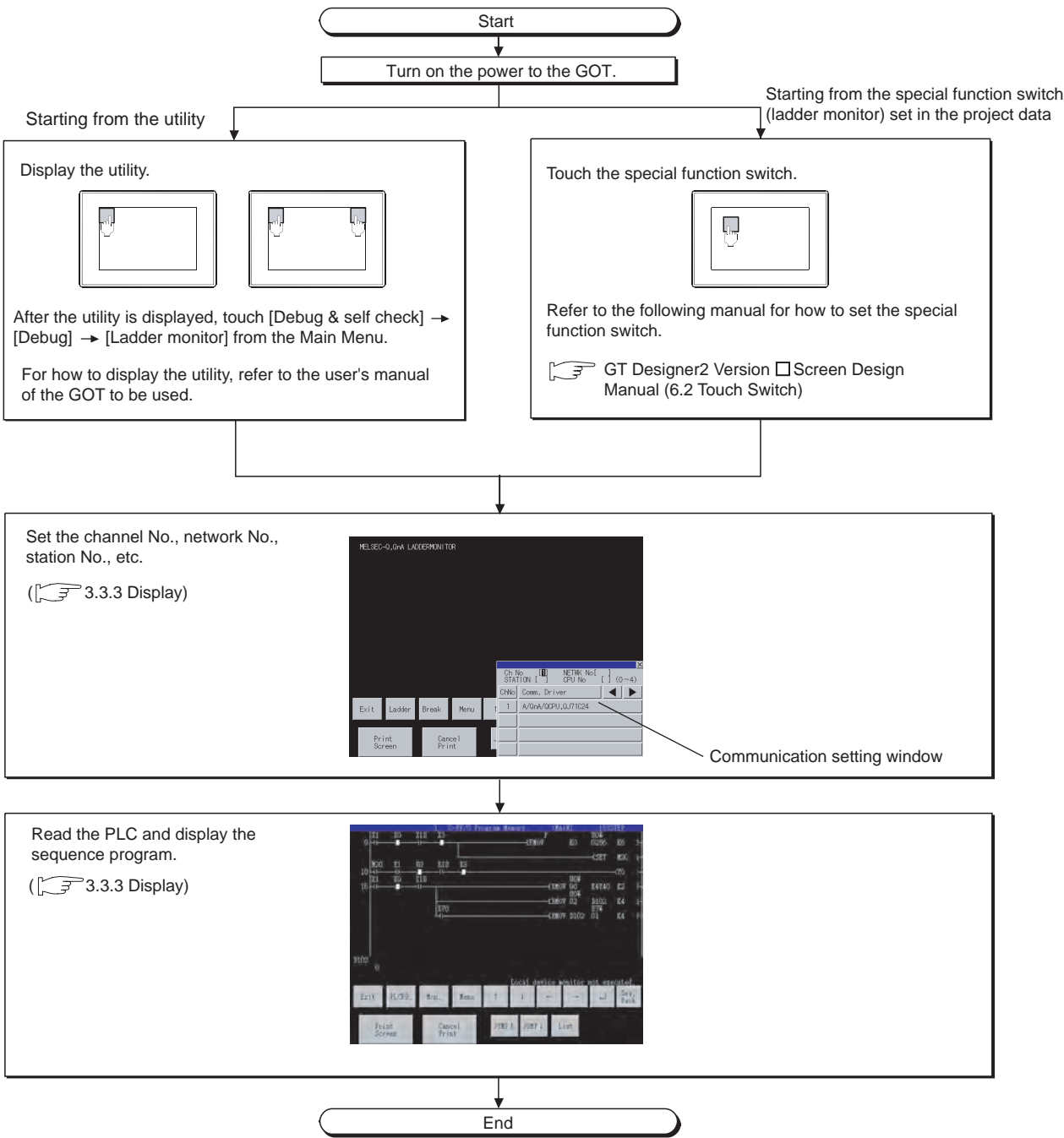
3.3 Display

This section describes the operation procedure from turning on the power to the GOT to ladder monitor function display.

3.3.1 Outline until the start

1 Operation for display

- (1) Normal operation
This subsection describes the flow until the ladder monitor operation screen is displayed after a ladder monitor (Option OS) is installed in the GOT.





- (1) How to display the utility

For how to display the utility, refer to the following.



GT16 User's Manual (8.3 Utility Display)

GT15 User's Manual (9.3 Utility Display)

- (2) How to make PLC reading unnecessary when turning the GOT power on again
With the MELSEC-Q/QnA ladder monitor, you can save ladder monitor data to a memory card or internal flash memory.

If you save the data beforehand, it is not necessary to read the PLC when switching the GOT power on again.



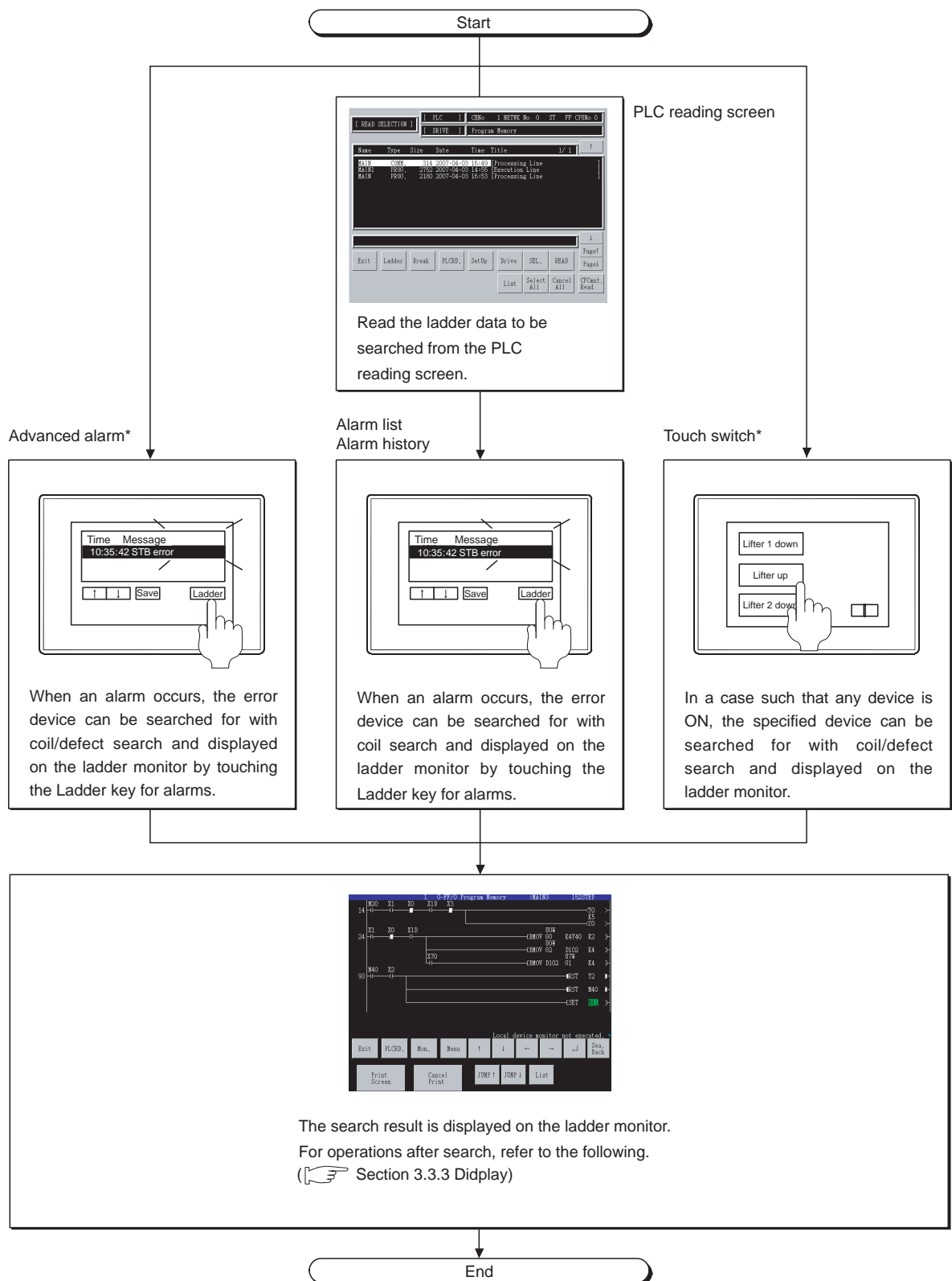
3.3.2 Setting and deleting media for saving ladder data)

- (3) If the project data has not been downloaded

The ladder monitor can be started from the utility even if the project data has not been downloaded to the GOT.

(2) Searching from the monitor screen

The following describes the operation procedures of ladder search using the advanced alarm display, alarm list display, alarm history display, and touch switch.



*When the automatic PLC read setting is not made, ladder data must be read in advance.



(1) Before searching

When searching program files and displaying the result from the advanced alarm or touch switch with the Q/QnA ladder monitor, programs are read automatically and searched by using the automatic PLC read setting. Programs need not be read in advance.

(2) When powering on the GOT again

When searching program files with the A/FX ladder monitor or with the Q/QnA ladder monitor for which the automatic PLC read setting is made with [None] set as the data storage destination, PLC reading is required every time powering on the GOT.

For the Q/QnA ladder monitor, setting data storage destination eliminates the need of PLC reading when the GOT is powered on again.

For settings of automatic PLC read and data storage destination, refer to the following manual.

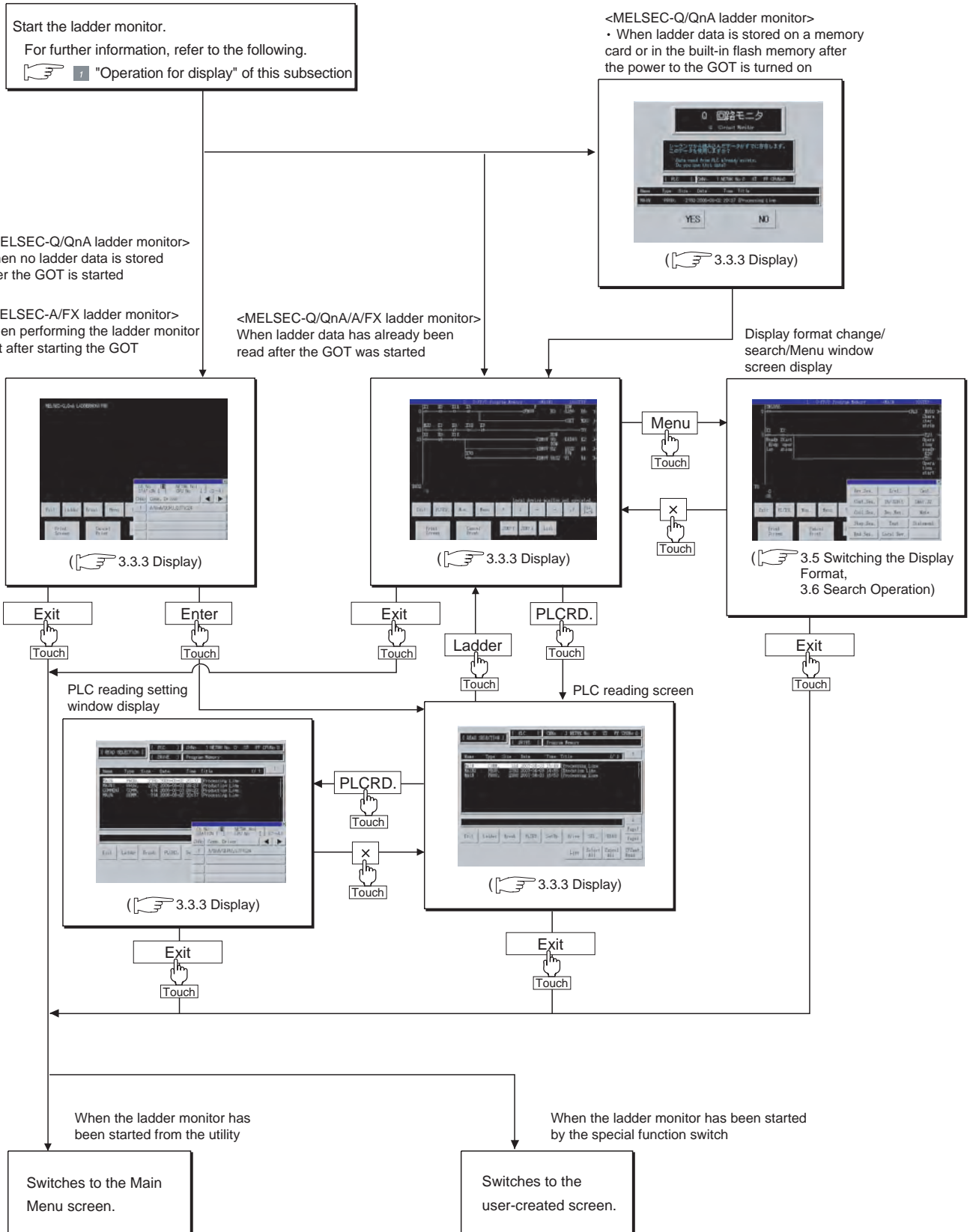


GT Designer2 Version2 Screen Design Manual

2 Changing screens

The following describes screen changes of (1) Normal operation using an example of the Q/QnA ladder monitor.

Screen changes of the A/FX ladder monitor is the same.



3.3.2 Setting and deleting media for saving ladder data

1 Setting the ladder data storage destination


(1) Setting for the Q/QnA ladder monitor

Up to 512 files of data used for the ladder monitor function (sequence programs, device comments) can be stored in a selected drive.

Storing ladder data eliminates the need to read ladder data from the PLC CPU every time powering on the GOT, reducing the time before executing the ladder monitor.

For the ladder data storage destination setting, refer to the following manual.

When setting with the utility

 GT15 User's Manual (Section 11.7 Q/QnA Ladder Monitor)

When setting with GT Designer2

 GT Designer2 Version□ Screen Design Manual (Section 3.8 Setting of GOT Display and Operations (GOT Setup))



Precautions when the ladder data storage destination is set to [None]

- Only one sequence file and comment file of ladder data can be read in the GOT.
- When searching program files using the one-touch ladder jump function, specify a file to be searched.

(2) Setting for the A/FX ladder monitor

Ladder data cannot be stored.


For the A/FX ladder monitor, data for ladder monitoring are deleted every time the GOT is powered on again.

2 Deleting ladder data


Ladder data can be deleted with the ladder monitor screen or the utility.

For deletion of ladder data, refer to the following.

When deleting with the ladder monitor screen

 Section 3.3.3 Display

When deleting with the utility

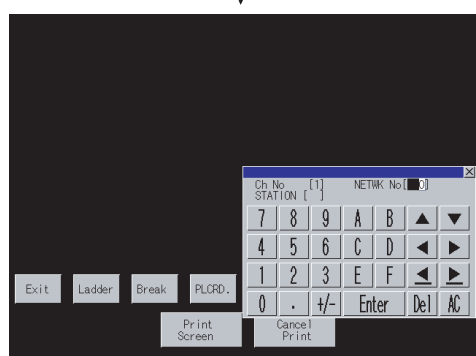
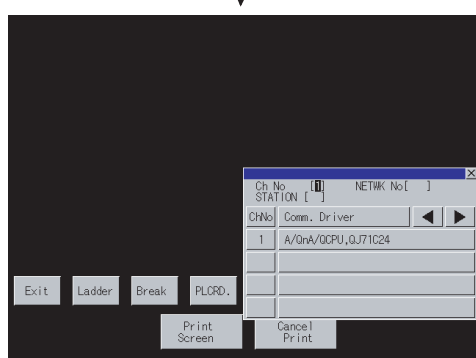
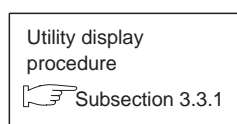
 GT16 User's Manual (Section 11.2.1 Q/QnA Ladder Monitor)
GT15 User's Manual (Section 11.7 Q/QnA Ladder Monitor)

3.3.3 Display

This subsection describes the procedure for reading the PLC to read the sequence program from the target controller when the ladder monitor is executed, and until the ladder monitor screen is displayed. The operation of reading the PLC depends on the controller type.

1 When the MELSEC-A/FX ladder monitor is executed

The MELSEC-A ladder monitor is taken as an example to describe the operation procedure.



(Continued to next page)

1 The communication setting window is displayed.

- The name of the Communication driver installed in the GOT is displayed.
- Touch "ChNo." on the communication setting window and set the channel number of the controller targeted to the ladder monitor.

2 Touch the key, and move the cursor to "NETWK No []."

3 Set the network number of the target controller and the CPU station number according to the table shown below.

Setting	Connection form					
	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	CC-Link (intelligent device station)	MELSEC NET/10 connection
NETWK No		0		1 to 239	0	0: Host loop 1 to 255: Specified loop
STATION*1		FF		1 to 64	0: When the master station is selected 1 to 64: When a local station is selected FF: When the host station is selected	0: When the control station is selected 1 to 64: When a normal station is selected

*1 When the station No. is set to the host station (FF), set the network No. to 0.

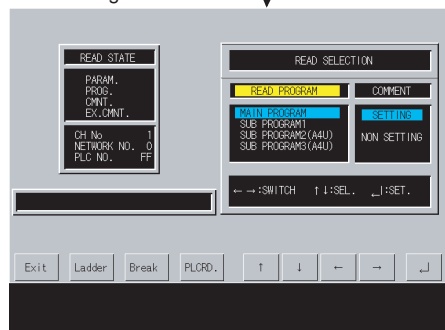
For the operation of the key window, see the following:





Subsection 2.4.3 Key window setting columns and operation procedure

4 Entry is completed by touching the key, and the key window closes.

(From previous page)

PLC reading screen



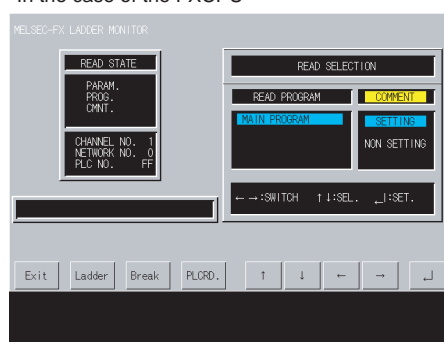
- 5 Touch the , , , and  keys to specify the following items listed under "READ SECTION."

- Sequence program
(In the case of the MELSEC-A ladder monitor)
Main program
Subprogram 1
Subprogram 2 (A4U)
Subprogram 3 (A4U)

(In the case of the MELSEC-FX ladder monitor)
Main program (fixed)

- SETTING/NON SETTING for comment reading

In the case of the FXCPU



- 6 After the items under "READ SECTION" are specified, touch the  key.

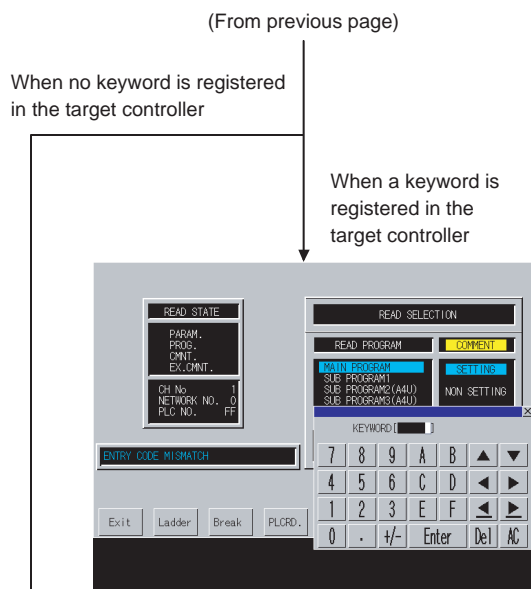
Point

Displaying the ladder monitor screen

The MELSEC-FX ladder monitor screen displays the sequence program that was executed when the PLC was read. If any of the set values of the sequence program is changed, re-read the PLC. Changes to set values are displayed on the screen when the MELSEC-A ladder monitor is executed.

It is not necessary to re-read the PLC.

(Continued to next page)



7 Enter the keyword registered in the target controller.

(In the case of the MELSEC-A ladder monitor)

The data entered can be corrected with the following keys:

[Del] key: Used to delete a character of the entered information.

[AC] key: Used to delete all characters entered.

(In the case of the MELSEC-FX ladder monitor)

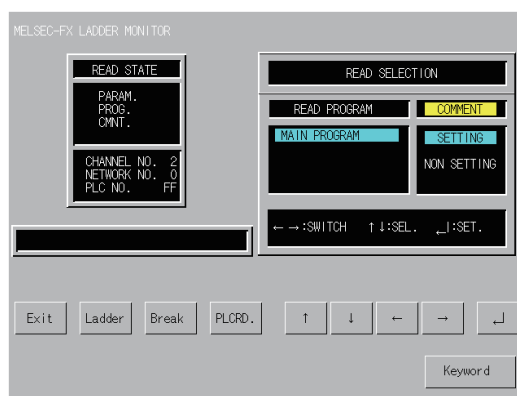
Touch the **[Keyword]** key to enter the keyword registered in the target PLC CPU.

Refer to the following manual for the FX CPU keywords.



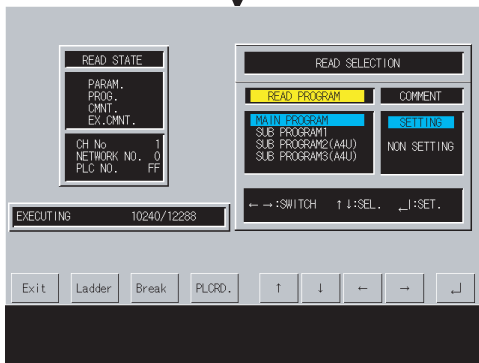
GT16 User's Manual (10.2.3 Display contents of communication detail settings)

GT15 User's Manual (10.2.3 Display contents of communication detail settings)



(Continued to next page)

(From previous page)

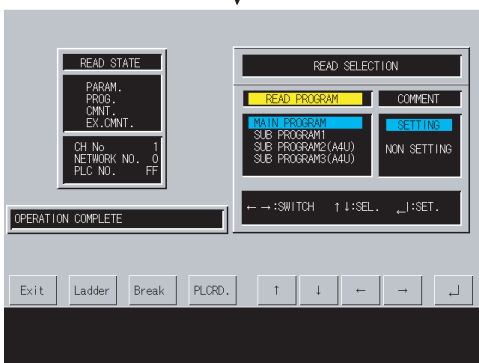


8 The sequence program is read.

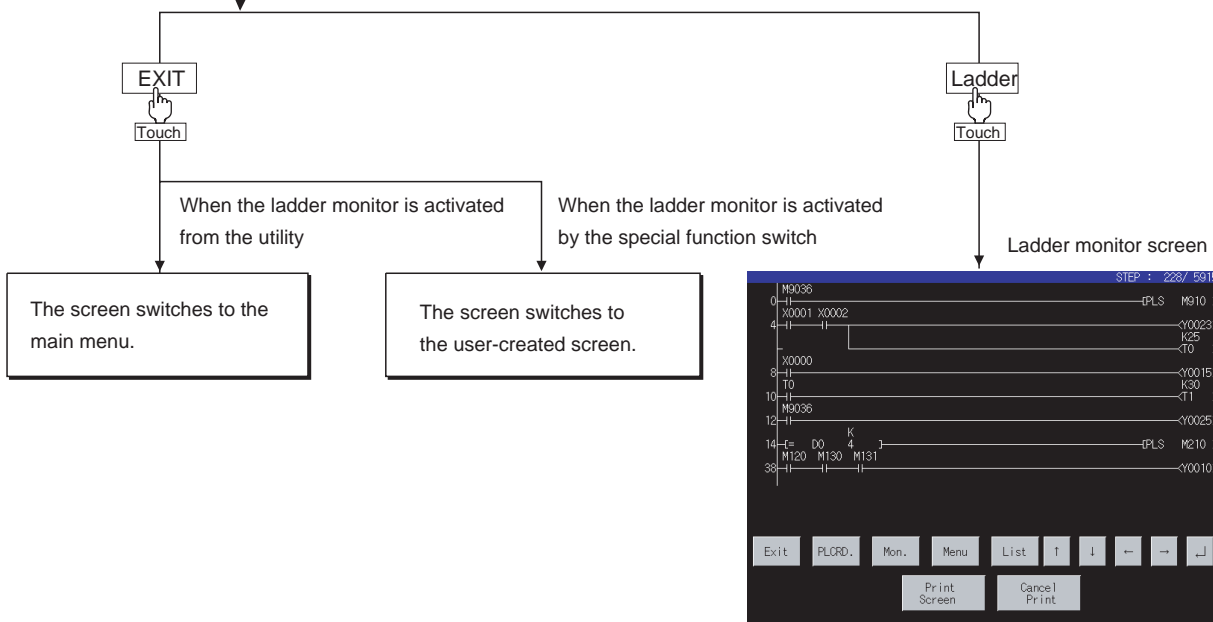
- The message "EXECUTING" is displayed.
- The entire size of the program and the portion already read are displayed.

Portion already read/entire program size

- The reading of the PLC stops by touching the **Break** key.



9 The reading of the sequence program is completed.
The message "OPERATION COMPLETE" is displayed.



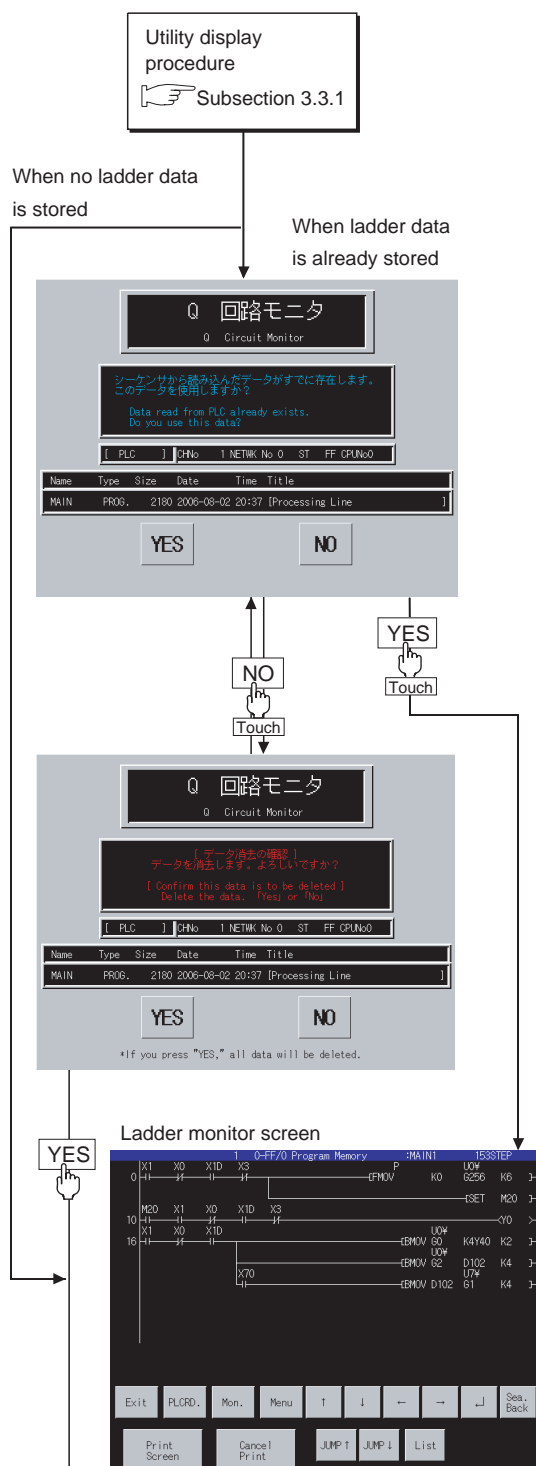
Reading the PLC in the following operations

Once the PLC is read, you do not have to read it in the following operations. However, it must be re-read after you read it and then downloaded project data and when the power to the GOT is turned on again.

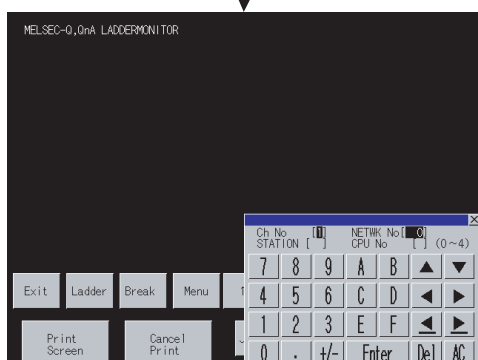
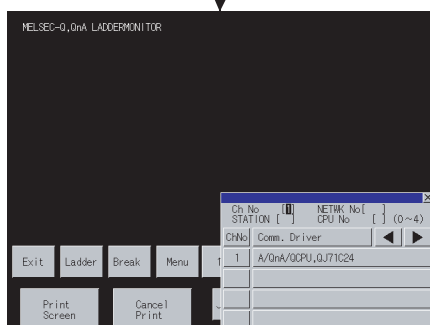
2 When the MELSEC-Q/QnA ladder monitor is executed

The MELSEC-Q ladder monitor is taken as an example to describe the operation procedure.

With regard to the MELSEC-QnA ladder monitor, if any keyword is entered in the target controller, it must be entered after 6.



(From previous page)



(Continued to next page)

3 The communication setting window is displayed.

- The name of the Communication driver installed in the GOT is displayed.
- Set the channel number of the controller targeted to the ladder monitor.

4 Touch the key, and move the cursor to "NETWK No []."

5 Set the network number of the target controller, the CPU station number, and the CPU number according to the table shown below.

Setting	Setting range				
	Connection form				
	Bus connection, Direct CPU connection, Computer link connection	Ethernet connection	MELSEC NET/H, MELSEC NET/10 connection	CC-Link IE controller network connection	CC-Link (intelligent device station)
NETWK No	0	1 to 239	0: Host loop 1 to 255: Specified loop	1 to 239	0
STATION ^{*1}	FF	1 to 64	0: When the control station is selected 1 to 64: When a normal station is selected	1 to 120	0: When the master station is selected 1 to 64: When a local station is selected
CPU No	0 to 4 (Set this item only for the MELSEC-Q ladder monitor.)				

^{*1} When the station No. is set to the host station (FF), set the network No. to 0.

For the operation of the key window, see the following:



Subsection 2.4.3 Key window setting columns and operation procedure

6 Entry is completed by touching the key, and the key window closes.



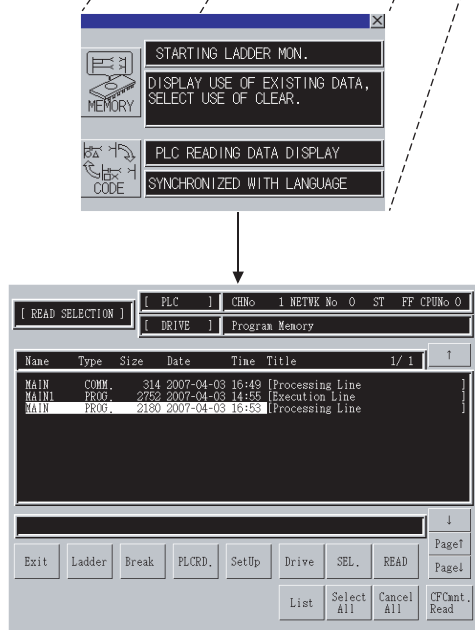
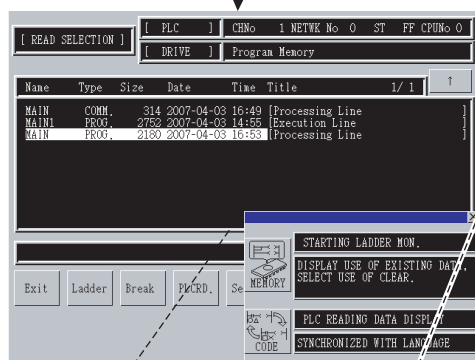
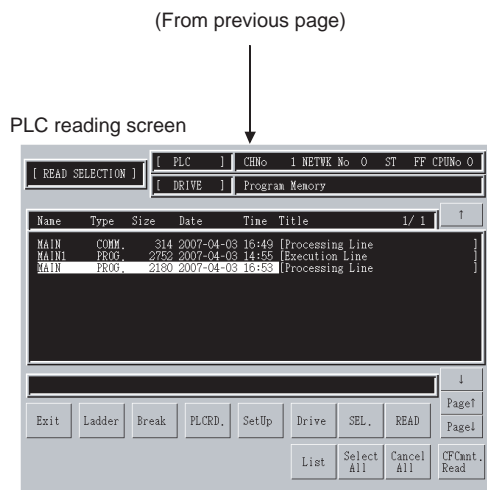
In the case of Ethernet connection

Set a monitor target using GT Designer2 in advance.

For further information about the setting of monitor target, see the following:



GOT1000 Series
Connection Manual



(Continued to next page)

- 7 The PLC reading screen is displayed.
Touch the **SetUp** key. The setting window appears.

Point

Displaying the ladder monitor screen

When the drive for storing ladder data is set to [C: Flash Memory], the ladder monitor screen displays the sequence program at the time of reading data from the PLC.

If any of the set values of the sequence program is changed, re-read the PLC.

When the drive for storing ladder data is set to [A: Built-in CF card] or [B: Memory card], changes of the set values are reflected in the screen display.

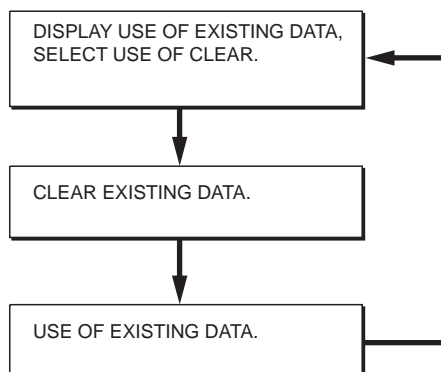
Rereading data from the PLC is not required.

- 8 The setting window appears. Make settings for the initial activation of the ladder monitor.*

The settings shown below switch each time you touch the



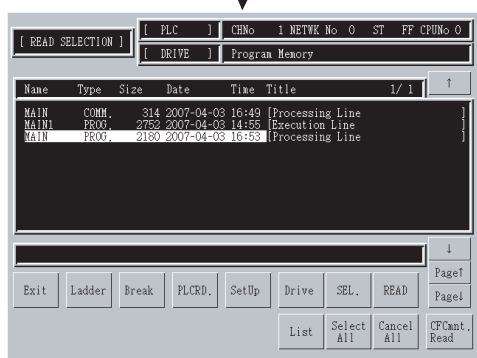
key.



*This setting is invalid when the automatic PLC read setting is made or a searched file is specified, when performing coil search or defect search from the key code switch or the special function switch set for the advanced alarm display.

- 9 The After the setting is completed, touch the ☐ button to close the Setting window.
- 10 Using the **Drive** key, select the target drive (applicable memory) in which the ladder data to be monitored is saved.

(From previous page)



(Continued to next page)

- 11 The drive selection window is displayed. Enter the target drive (applicable memory).
Drive number setting range: 0 to 4

[Del] key :Used to delete a character of the entered information.

[AC] key :Used to delete all characters under the cursor.

[Enter] key :Registers the entered information.
When any keyword is set for the selected drive, enter the keyword.
If canceling the entry, reading of the drive is canceled.

- 12 A list of the files stored in the selected drive is displayed. Using the keys shown below, select the file data you want to read.

[↑] key :Moves the cursor upward.

[↓] key :Moves the cursor downward.

[Page↑] key :Displays the preceding page.

[Page↓] key :Displays the following page.

[SEL.] key :Select/Cancel is switched by moving the cursor and touching this key.

[Select All] key :Selects all the files in the drive.

[Cancel All] key :Cancels all the file selections.

[READ] key :Starts the reading of the file data selected.

[CF Cmmt. Read] key
:Starts reading a comment file from a CF card.

Set the drive to be used for reading the comment file in [Q/QnA ladder monitor] of the utility or [GOT Setup] of GT Designer2.

☞ GT16 User's Manual (11.2.1 Q/QnA Ladder Monitor)
GT15 User's Manual (11.7 Q/QnA Ladder Monitor)
GT Designer2 Version □ Screen Design Manual
(Setting of GOT Display and Operations (GOT Setup))

For reading comment files from CF cards, refer to the following.

☞ Subsection 3.3.5 Reading comment files from CF cards



Multiple ladder data storable

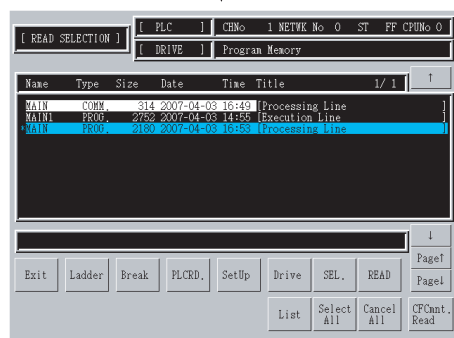
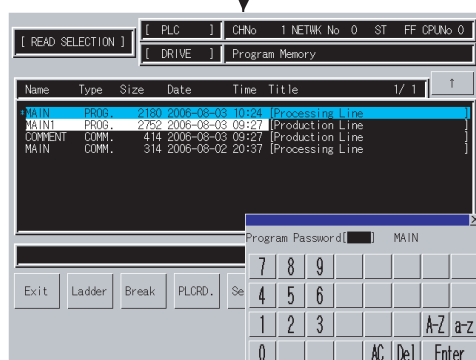
Multiple sequence and comment programs can be read.
For the PLC read setting, refer to the following manuals.

☞ GT16 User's Manual
GT15 User's Manual
GT Designer2 Version □ Screen Design Manual

(From previous page)

When no password is entered
in the target controller

When a password is entered
in the target controller



(Continued to next page)

- 13 Enter the password entered in the target controller.
In the case of the QCPU, a password is entered in the sequence and comment files.

Point

When entering passwords for multiple files

When reading multiple files with passwords set, enter passwords for respective programs.

Canceling an entry cancels the reading of the file.

A-Z key :Uppercase alphabetic characters

a-z key :Lowercase alphabetic characters

The data entered can be corrected with the following keys:

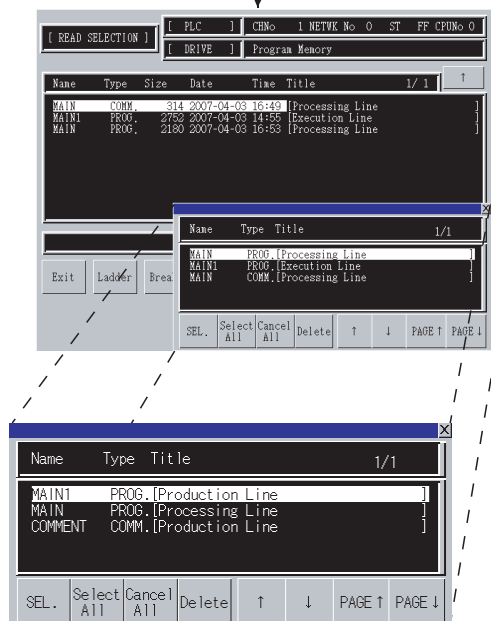
Del key :Used to delete a character of the entered information.

AC key :Used to delete all characters entered.

- 14 The sequence program is read.
- The message "READING PROGRAM" is displayed.
 - The entire size of the program and the portion already read are displayed.
- Portion already read/entire program size
- The reading of the PLC stops by touching the **Break** key.

- 15 After sequence programs are read,
the message "OPERATION COMPLETE" is displayed.

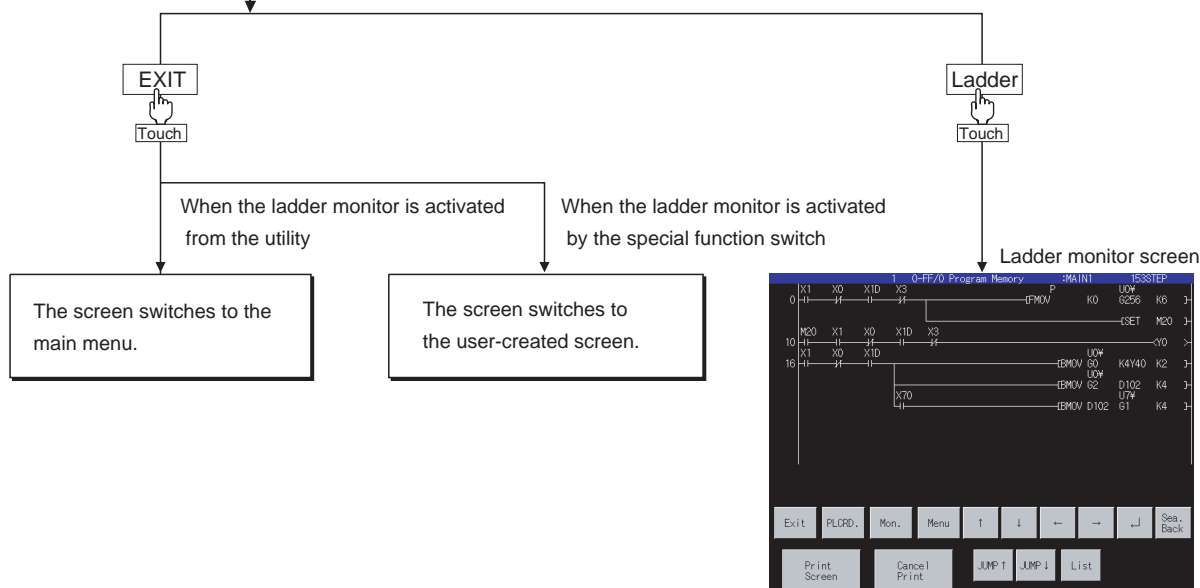
(From previous page)



- 16 To delete the read ladder data, touch the List key.
The program files and comment files stored in the built-in flash memory of the GOT or in the memory card are displayed.

Files can be selected by touching a key or directly touching the display part.

- SEL.** key :Select/cancel is switched by moving the cursor and touching this key.
Select All key :Selects all files.
Cancel All key :Cancels all selections.
Delete key :Deletes the file selected.
↑ key :Moves the cursor upward.
↓ key :Moves the cursor downward.
Page ↑ key :Displays the preceding page.
Page ↓ key :Displays the following page.



Reading the PLC in the following operations

Once the PLC is read with the power to the GOT turned on, you do not have to read it in the following operations.

3.3.4 Searching from the monitor screen

When starting a ladder monitor with object, coil-search/defect search can be automatically performed to the read sequence program and the result can be displayed on the monitor.

1 Usable objects and functions list

The following table shows the types of objects can be searched from a monitor screen and functions usable in each object.

For object setting to display searching result on ladder monitor, refer to the following manual.

 GT Designer2 Version□ Screen Design Manual

(1) MELSEC-Q/QnA ladder monitor

(○: Applicable x: Inapplicable)

Object	Function			
	Automatic PLC read	Specify Search File	Coil	Factor
Special Function Switch	○ ^{*1}	○	○	○
Advanced Alarm Display	○ ^{*1}	○	○	○
Alarm List	x	x	○	x
History	x	x	○	x

^{*1} For reading comment files from CF cards, refer to the following.

 Subsection 3.3.5 Reading comment files from CF cards

(2) MELSEC-A/FX ladder monitor

(○: Applicable x: Inapplicable)

Object	Function			
	Automatic PLC read	Specify Search File	Coil	Factor
Special Function Switch	x	x	○	x
Advanced Alarm Display	x	x	○	x
Alarm List	x	x	○	x
History	x	x	○	x

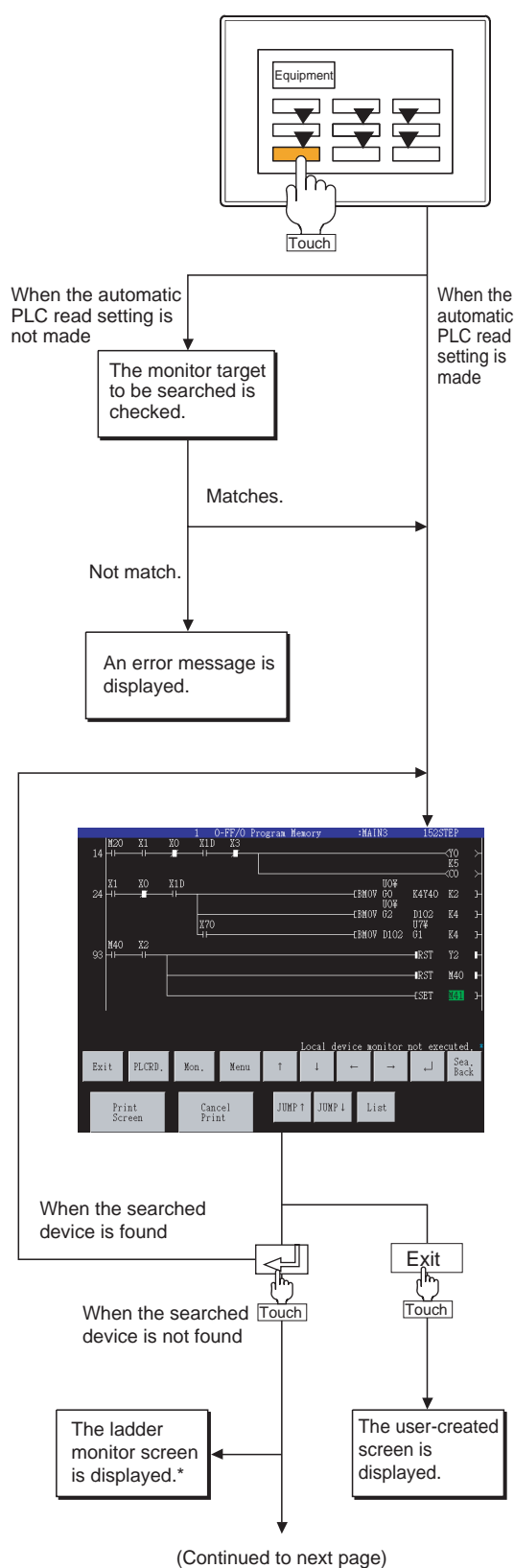
2 Searching operation

- (1) When displaying searching result with the Advanced Alarm Display or Special Function Switch
The following explains the procedure from touching the Key Code Switch for advanced alarm display or Special Function Switch and performing coil-search or defect search to display of a ladder block.*

The following flowchart explains the operation when the destination to save the ladder block data is specified.

* When performing MELSEC-A/FX ladder monitor, the operation is the same when displaying the searching result with Alarm List or History explained (2) .

The following explains the operation taking MELSEC-Q ladder monitor as an example.



* After coil-search, monitoring of the displayed ladder starts automatically. (During MELSEC-A/FX ladder monitor, touching the monitor key starts the same operation.)

1 Touch a key in monitor screen.

The operation differs depending on object setting.

(1) When the Automatic PLC read setting is made

- (a) When [Specify Search File] is selected
Reads the specified sequence program.
- (b) When [Specify Search File] is not selected
Reads all sequence programs in the program memory of the target controller. For setting method of Automatic PLC read, refer to the following manual.

GT Designer2 Version□
Screen Design Manual

(2) When the Automatic PLC read setting is not made

Searching starts only when the monitor target of the sequence program that has been read and the monitor target that is set for searching on the object match.

When they are mismatch, an error message appears.

Read again to match the monitor target for searching on the PLC reading screen.


2 When a keyword is registered to the read target drive, enter the keyword.

To read a file to which a password is registered, enter the password.

If canceling the entry, reading of the drive or file is canceled.

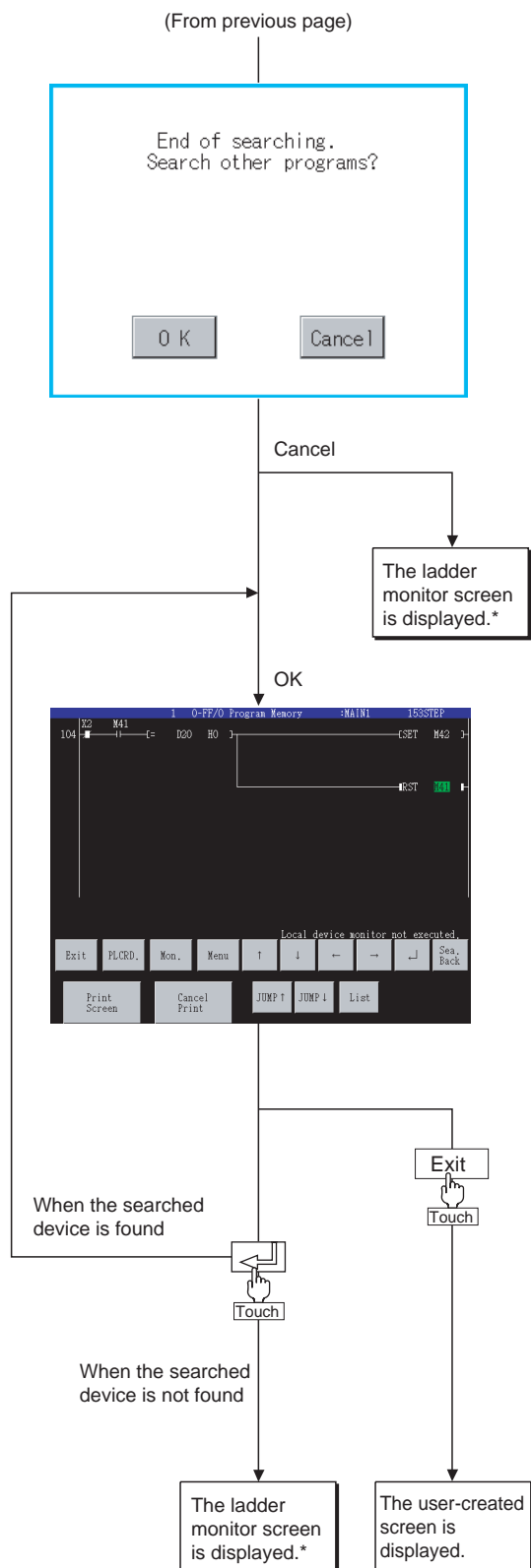
3 After the read program is searched, the result is displayed.

4 Touching the button searches consecutively.

Touching the  button completes searching halfway.

5 If the searched device is not found in the read program, the message "DEVICE NOT FOUND" appears and searching is completed.

After searching, the program that has been read first is displayed on the ladder monitor screen.



* After coil-search, monitoring of the ladder displayed is started automatically.

- 6 When multiple read programs exist, the dialog box which asks about searching for other programs appears.

Touching the **OK** button starts searching to all other read programs.

- 7 According to the order of the programs that have been read first, searching is started to the next file and the result is displayed.

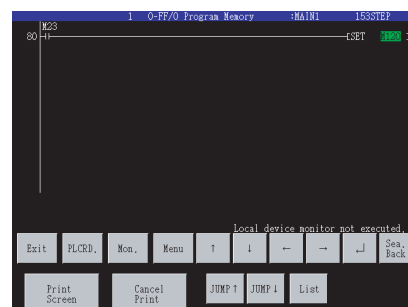
- 8 Touching the **Exit** button searches consecutively.

Touching the **Exit** button completes searching halfway.

Point

Ladder display during consecutive search

When displaying the ladder block in the next sequence file, the previous search results are cleared. (☞ Section 3.6.3 Coil search)



- 9 If the searched device is not found in all read programs, the message "DEVICE NOT FOUND" appears and searching is completed.

After searching, the program that has been read first is displayed on the ladder monitor screen.

- (2) When displaying searching result with Alarm List/History
The following explains the procedure from touching the Key Code Switch for user alarm display and performing coil-search of sequence program to display of a ladder block.


Point

Program to be searched

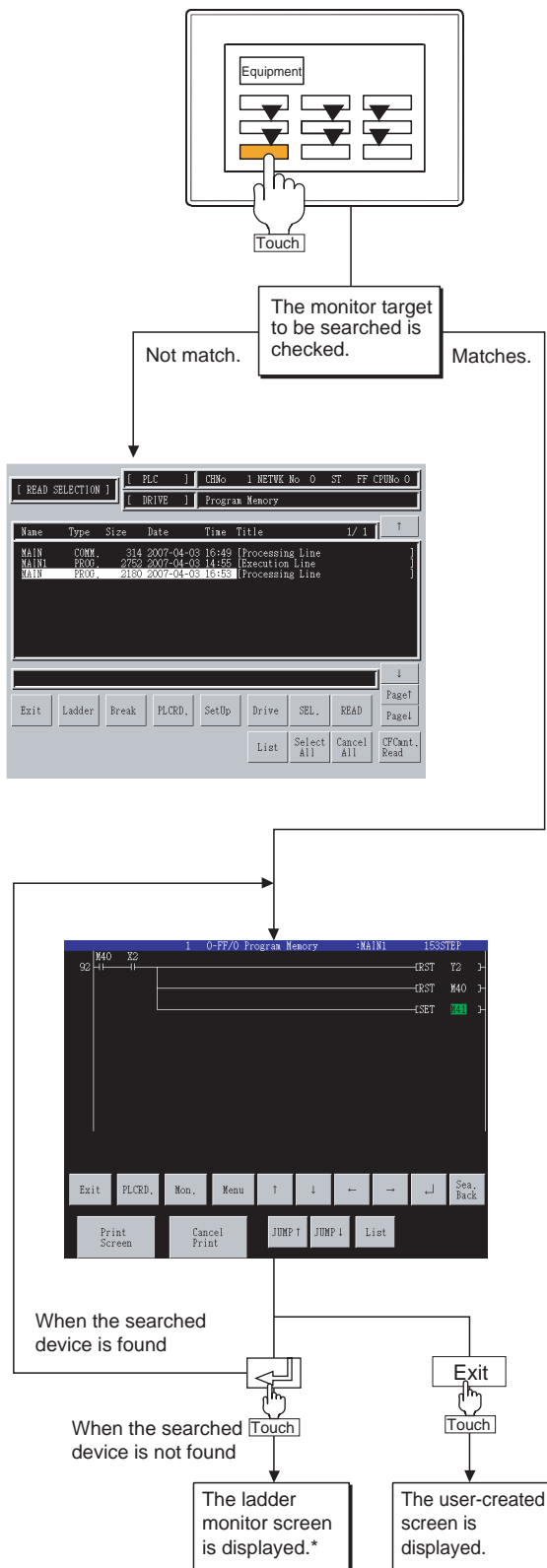
In Alarm List/History, coil-search is performed to the sequence program that has been displayed on the ladder monitor last among the read sequence programs. However, when no ladder programs have not been displayed, coil-search is performed to the sequence program that has been read first.

Therefore, the file to be searched has to be read from the PLC reading screen beforehand.

For setting from the PLC reading screen, refer to the following section.

 3.3.3 Display

The following explains the operation taking MELSEC-Q ladder monitor as an example.



* After coil-search, monitoring of the ladder displayed is started automatically. (For the A/FX ladder monitor, touching the Mon. key provides the same operation.)

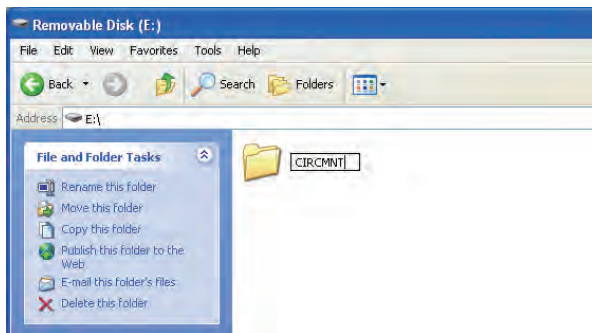
3.3.5 Reading comment files from CF cards

A comment file to be used for the ladder monitor can be read from a CF card installed on the GOT. Using a comment file stored in a CF card has the following advantages.

- The processing time is shorter than the one for reading a comment file from a PLC CPU.
- Writing comment file data into a PLC CPU is not required, so less memory of the PLC CPU is used.

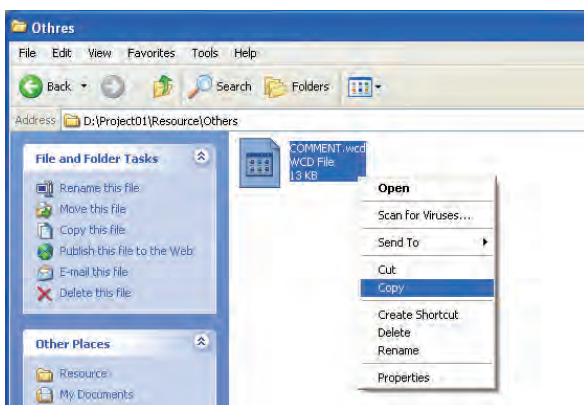
1 Procedure for using comment files stored in CF cards

The following shows the procedure for using a comment file stored in a CF card.

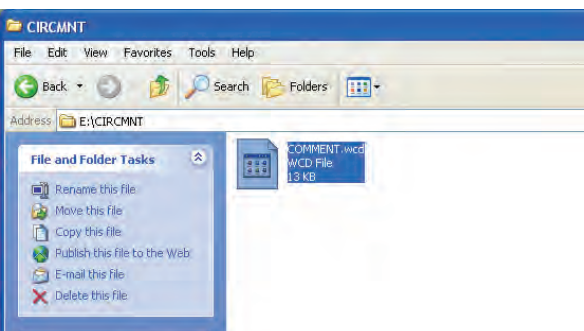


- 1 Create a folder with the folder name of CIRCMNT in a CF card.

When the CIRCMNT folder already exists, creating a new CIRCMNT folder is not required.



- 2 Copy a comment file (.wcd) from the project data of GX Developer.



- 3 Save the copied comment file in the CIRCMNT folder created in the CF card.
- 4 Install the CF card with the comment file on the GOT.
- 5 Read the comment file with the ladder monitor.



When using comment files stored in CF cards

When comment files exist both in a CF card and a PLC, the comment file to be used may not be read.

For using a comment file stored in a CF card, do not write comment file data into a PLC.

3.4 Operation Procedure Common

This section describes the information and key functions displayed on the ladder monitor screen. The display screen of the ladder monitor varies slightly with the GOT used. This chapter mainly uses the screen of the GT1575-V for explanation.

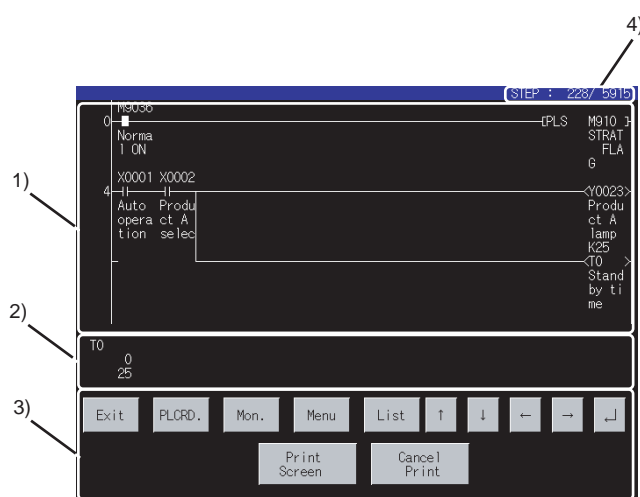
3.4.1 Information and key functions displayed on the screen

The ladder monitor screen depends on the controller type.











After executing PLC reading, if the controller comment or comment capacity is changed, the comment may not be correctly displayed on the ladder monitor screen. When changing the comment or comment capacity, re-start the GOT.


- (1) When the MELSEC-A/FX ladder monitor is executed
 - (a) Display monitor





When comment is not displayed :maximum 8 lines
When comment is displayed :maximum 3 lines

ON/OFF status display for ladder monitor














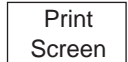


· ON status :    
· OFF status :    

* The MCR command is normally displayed as .

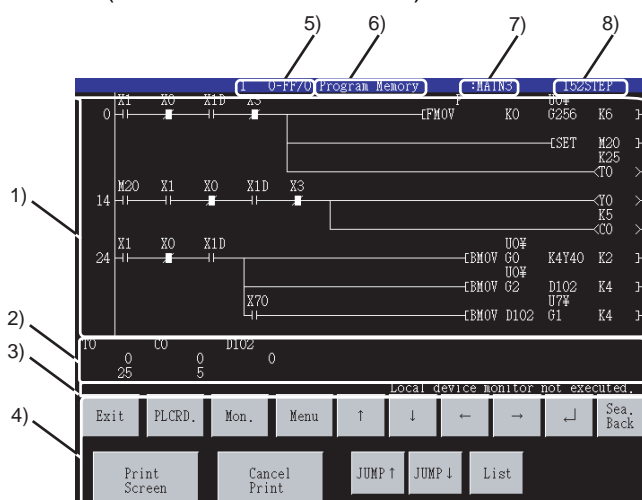
The information shown in the table below is displayed.

No.	Description
1)	Sequence program is displayed. A maximum of 11 contact points is displayed in one line of a ladder; for 12 contact points or more, move to the next line. When a comment display is specified, a comment is also displayed; expanded comments are given priority. For the method of displaying comments, see the following:  Subsection 3.5.3 Switching comment/no-comment display
2)	A maximum of eight devices is displayed for the word device current value, timer and counter current value (upper row), and set value (lower row). When the set value is an indirect specification, the value of the indirectly specified device is displayed. To switch between decimal and hexadecimal for the displayed value, see the following:  Subsection 3.5.2 Display switching of decimal numbers/hexadecimal numbers
3)	Display the keys used with the operation on the ladder monitor screen shown in (b) (Touch input).
4)	The display step number (left) and the remaining step number (right) are displayed.

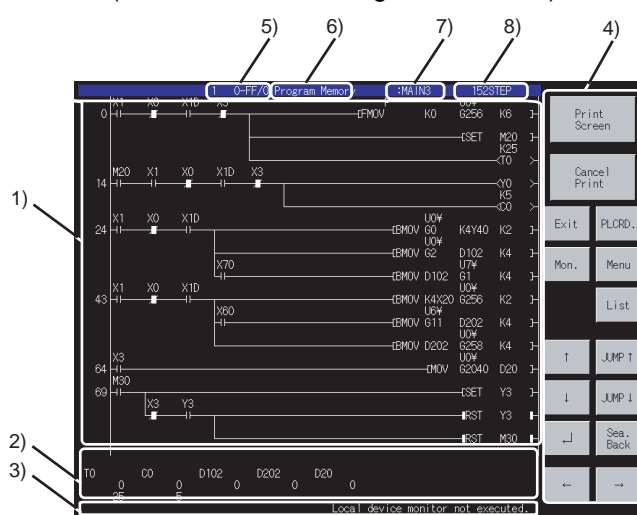
(b) Key functions (when the MELSEC-A/FX ladder monitor is executed)

Key	Function
	Returns the screen to the one displayed when the ladder monitor was activated.
	Switches the screen to the PLC reading screen to read from the controller the sequence program to be monitored. For further information about PLC reading, see the following:  Subsection 3.3.3 Display
	Starts monitoring the displayed sequence program.
	Displays the Menu window for ladder monitor ( This section (2)).
	Starts the list editor for A/FX. For details on the A/FX list editor, refer to the following.  <ul style="list-style-type: none"> • Chapter 4 MELSEC-A LIST EDITOR • Chapter 5 MELSEC-FX LIST EDITOR
	Scrolls the information upward by a ladder block.
	Scrolls the information downward by a ladder block.
 	When the number of devices whose present and set values are within the display range shown in 2) on the preceding page is nine or more, the devices to be displayed are switched.
	Scrolls the information downward by a screen. In search operation, a search is continuously performed under the same conditions.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, see the following:  Subsection 3.4.2 Hard copy output
	The operation of this key is invalid.

- (2) When the MELSEC-Q/QnA ladder monitor is executed
 (a) Display screen
 (GOT with VGA resolution)



(GOT with SVGA or higher resolution)



The information shown in the table below is displayed.

No.	Function
1)	Sequence program is displayed. A maximum of 11 contact points is displayed in one line of a ladder; for 12 contact points or more, move to the next line. When [Comment Display] is specified, comments are also displayed. For the method of displaying comments, see the following: Subsection 3.5.3 Switching comment/no-comment display.
2)	A maximum of eight devices is displayed for the word device current value, timer and counter current value (upper row), and set value (lower row). When the set value is an indirect specification, the value of the indirectly specified device is displayed. To switch between decimal and hexadecimal for the displayed value, see the following: Subsection 3.5.2 Display switching of decimal numbers/hexadecimal numbers.
3)	The current status of monitoring local devices is displayed. *** blinks just to the right of the local device monitor status display during communicating with a PLC CPU. Nothing is displayed without monitoring. <ul style="list-style-type: none"> • Auto setting(program names). : A local device is monitored. (The active program name is displayed.) • Local device monitor not executed. : A local device is not monitored. • Local device monitor is not supported. : The PLC CPU being used is inapplicable to the local device. For switching the local device monitor between execution and non-execution states, refer to the following. This section (3)

For the number of characters of comments and comment display, see the following:

- Subsection 3.5.3 Switching comment/no-comment display
 Subsection 3.5.4 Displaying 32 characters of comments

ON/OFF status display for ladder monitor

- ON status :
- OFF status :

* The MCR command is normally displayed as

For the number of characters of comments and comment display, see the following:

- Subsection 3.5.3 Switching comment/no-comment display
 Subsection 3.5.4 Displaying 32 characters of comments















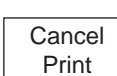




ON/OFF status display for ladder monitor

- ON status :
- OFF status :

* The MCR command is normally displayed as



No.	Function
4)	Display the keys used with the operation on the ladder monitor screen shown in (b) (Touch input).
5)	The Ch No., the network No., the station No. and CPU No. are displayed. (Only when the MELSEC-Q ladder monitor function is executed.)
6)	The drive is displayed.
7)	The file name of the PLC program is displayed.
8)	The total number of steps in the current monitor PLC program is displayed.

(b) Key functions (when the MELSEC-Q/QnA ladder monitor is executed)

No.	Function
	Returns the screen to the one displayed when the ladder monitor was activated.
	Switches the screen to the PLC reading screen to read from the controller the sequence program to be monitored. For further information about PLC reading, see the following:  Subsection 3.3.3 Display
	Starts monitoring the displayed sequence program.
	Displays the Menu window for ladder monitor ( This section (2)).
 	When the number of devices whose present and set values are within the display range shown in 2) on the preceding page is nine or more, the devices to be displayed are switched.
 	Scroll the information upward and downward by a ladder block.
	Scrolls the information downward by a screen. In search operation, a search is continuously performed under the same conditions.
	Displays back past device/contact point/coil searches or touch searches by one.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, see the following:  Subsection 3.4.2 Hard copy output
	The operation of this key is invalid.
 	Jump the information upward and downward by ten ladder blocks.
	Displays the program list window ( This section (3))

About the  key (Only when the MELSEC-Q/QnA ladder monitor is executed.)

- (1) Continuous device search by  key






Immediately after the  key has been pressed to go back in the history, a continuous device search using the  key cannot be executed.

- (2) Number of histories that can be gone back

Using the  key, you can go back into the history up to 100 ladders.

- (3) Clearing search history


When any of the following operations is performed, the search history is cleared to return to the normal ladder display.

- When the   key is touched.
(When a single ladder block takes up more than one screen, scrolling can be made within the block.)
- When the   key is touched.
- When a step search, END search or defect search is executed.
- When a comment display is changed.
- When a new file is read by touching .

- (4) Returning search results during searching in multiple sequence programs


- (a) Displaying search results

For searching in multiple sequence programs, the GOT can display search

results of the previously searched program by touching the  key.
The GOT cannot display search results of multiple programs on one screen.
When programs are switched, the currently displayed search results of the program disappear from the screen.

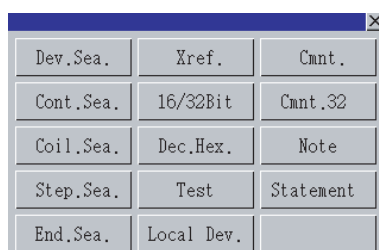
- (b) When searching program is deleted

For returning to the search results of the previously searched program by

touching the  key during searching in multiple sequence programs, the touch operation is canceled when the previously searched program is deleted.

(3) Menu window for the ladder monitor

(a) Display screen

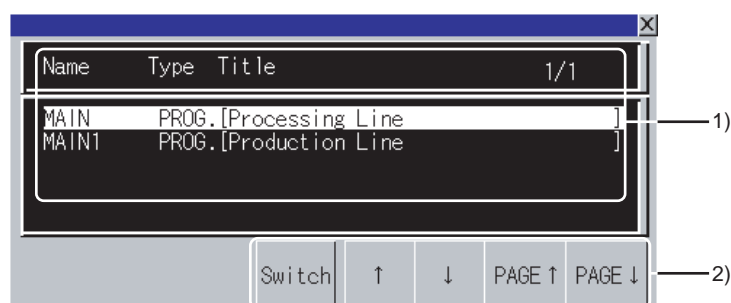


(b) Key functions

Key		Function
Search operation	Dev.Sea.	Displays the ladder block containing the specified device. Subsection 3.6.1 Device search
	Cont.Sea	Displays the ladder block containing the specified device. Subsection 3.6.2 Contact point search
	Coil.Sea.	Displays the ladder block containing the specified coil. Subsection 3.6.3 Coil search
	Step.Sea	Displays the ladder block containing the specified step number. Subsection 3.6.4 Step search
	End.Sea.	Displays the last ladder block of the sequence program. Subsection 3.6.5 Ladder end search
	Xref.	Searches the ladder blocks for the status of continuity/non-continuity of the contact point that turned on or off the coil on the sequence program. Subsection 3.6.6 Defect search
Display format switching	16/32Bit	Switches the word device and timer/counter values displayed on the ladder monitor screen to the 16-bit (one-word) or 32-bit (two-word) module. Subsection 3.5.1 Display switching of 16-bit (one-word)/32-bit (two-word) modules
	Dec.Hex.	Switches the word device and timer/counter values displayed on the ladder monitor screen to decimal or hexadecimal numbers. Subsection 3.5.2 Display switching of decimal numbers/hexadecimal numbers
	Cmnt.	Switches whether to display the comments added to the word and bit devices displayed on the ladder monitor screen. Subsection 3.5.3 Switching comment/no-comment display
	Cmnt.32	Displays the 32 characters of the comments to the word and bit devices displayed on the ladder monitor screen. For further information, see Subsection 3.5.4 Displaying 32 characters of comments This key is not displayed when the MELSEC-A and MELSEC-FX ladder monitor.
	Note	Switches whether to display integrated notes on the sequence program. Peripheral notes are represented by *. Subsection 3.5.5 Displaying notes This key is not displayed when the MELSEC-A and MELSEC-FX ladder monitor.
	Statement	Switches whether to display integrated statements on the sequence program. Peripheral statements are represented by *. Subsection 3.5.6 Displaying statements This key is not displayed when the MELSEC-A and MELSEC-FX ladder monitor.
Test operation	TEST	Changes device values on the screen when the ladder monitor is executed. For further information, see the following: Section 3.7 Test Operation
Local device monitor	Local Dev.	Switches the local device monitor between execution and non-execution states. Section 3.8 Local Device Monitor The key is not displayed with the MELSEC-QnA ladder monitor.

(4) Program list window





(a) Display screen



The following table shows the display details.

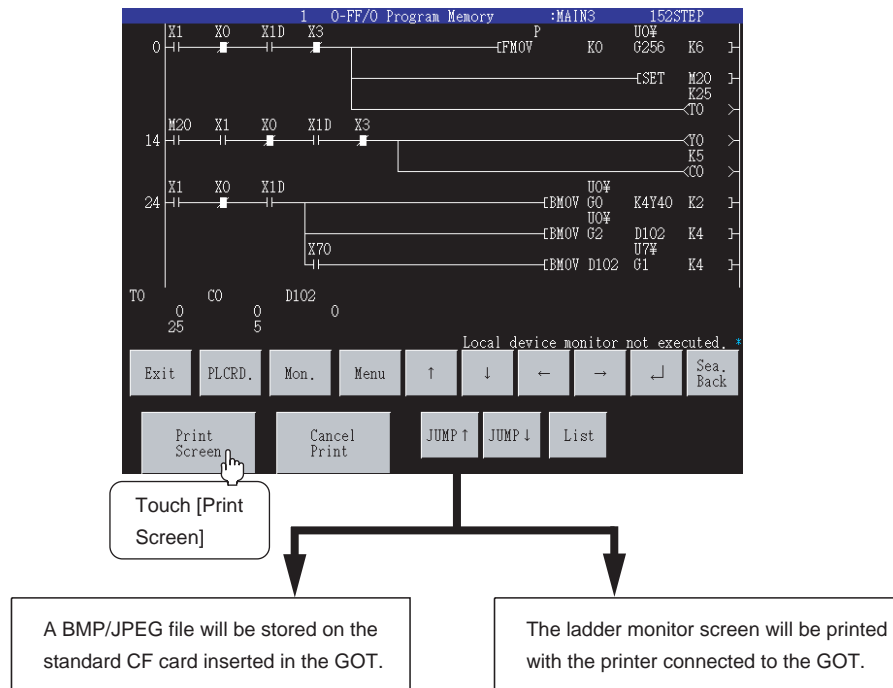
No.	Function
1)	Displays saved sequence program name.
2)	Displays the keys used in the program list window's operation. (Touch input) Besides key touch, a program name can be selected by touching the program name directly.

(b) Key functions

Key	Function
Switch	Switches to the selected ladder monitor screen.
 	Scrolls the display upward or downward by a file.
	Scrolls the display upward or downward by a page.
	

3.4.2 Hard copy output

This section describes how to store a ladder monitor screen to the memory card in BMP/JPEG file format or print it with a printer.



- Install the extended function OS (Printer) to the GOT when printing a ladder monitor screen.
- The output target (memory card/printer) of hard copy can be set in Hard Copy of GT Designer2.

For details of hard copy setting, refer to the following manuals.

- ➞ GT16 User's Manual (Chapter 13 DATA CONTROL)
- ➞ GT15 User's Manual (Chapter 13 FILE DISPLAY AND COPY)
- ➞ GT Designer2 Version□ Screen Design Manual (Section 13.2 Hard Copy)

- When outputting a hard copy, the display can be inverted between white and black. For invert colors setting, refer to the following manual.

- ➞ GT Designer2 Version□ Screen Design Manual (Section 13.2 Hard Copy)

3.5 Switching the Display Format

You can switch the display format (16-bit (one-word) module/32-bit (two word) module or decimal number/hexadecimal number) of word device and timer/counter values displayed on the ladder monitor screen, and whether to display the comments to the target devices.

3.5.1 Display switching of 16-bit (one-word)/32-bit (two-word) modules

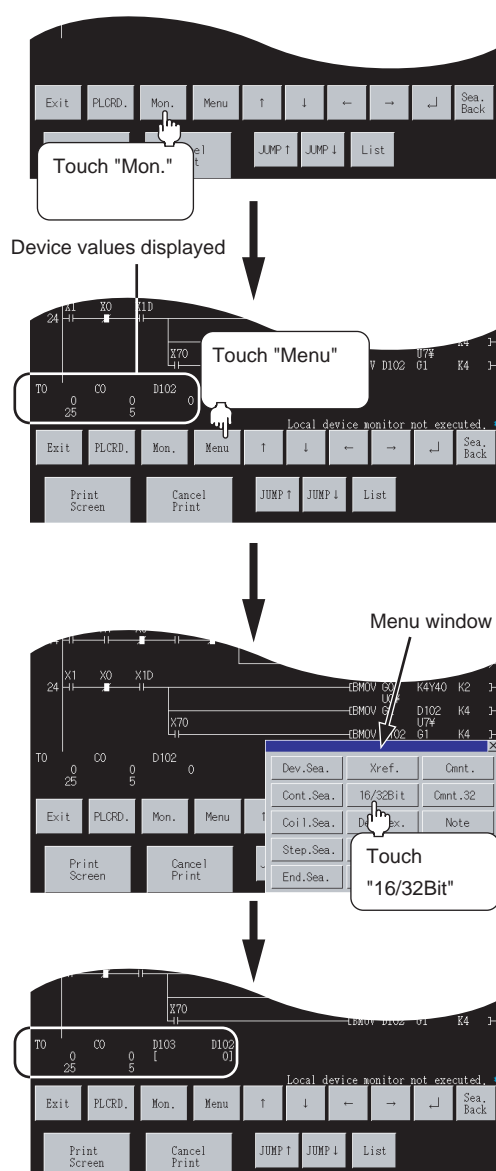
During monitoring, the present values of word devices (except timers and counters) are displayed in the 16-bit or 32-bit module. These modules switch alternately each time you press the **16/32Bit** key.



Displaying timers and counters

You cannot switch the 16-bit (one-word) or 32-bit (two-word) module with regard to the present and set values of timers and counters. The GOT automatically selects to display them in the 16-bit (one-word) or 32-bit (two-word) module.

(Operation example: Switch 16-bit (one-word) module display to 32-bit (two-word) module display.)



1 Touch **Mon.** .

2 Touch **Menu** .

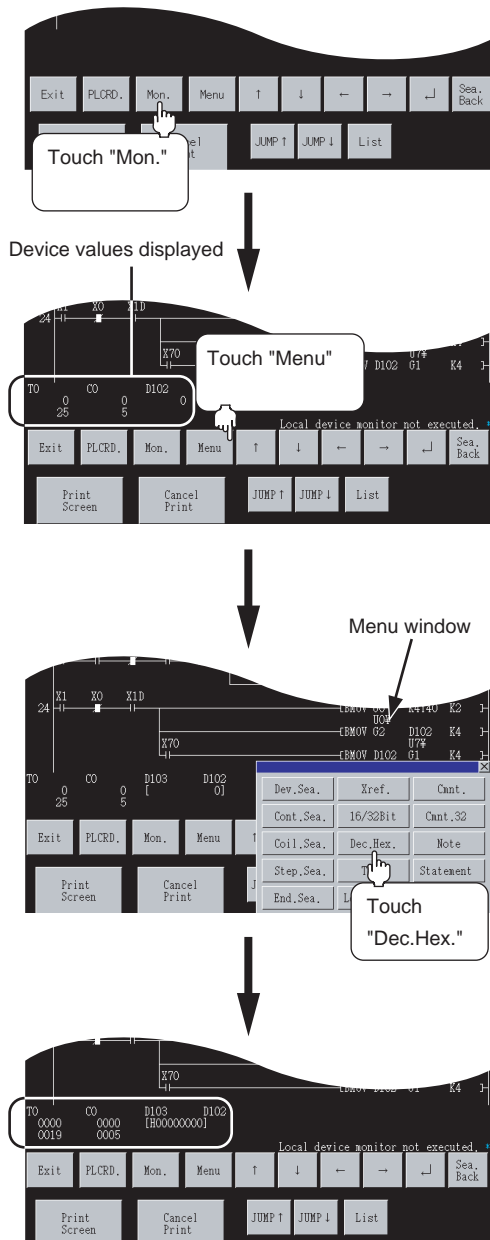
3 Touch **16/32Bit** .

4 The word devices are displayed in the 32-bit (two-word) module.

3.5.2 Display switching of decimal numbers/hexadecimal numbers

During monitoring, the present values of word devices and the present values (upper values) and set values (lower values) of timers/counters are displayed in decimal or hexadecimal numbers. The display formats switch alternately each time you press the **Dec.Hex.** key.

(Example of operation: Switching the decimal display to the hexadecimal display.)



1 Touch **Mon.** .

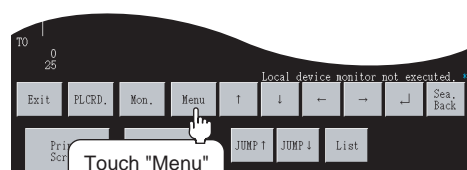
2 Touch **Menu** .

3 Touch **Dec.Hex.** .

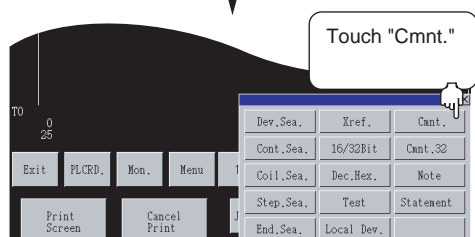
4 The values are displayed in hexadecimal numbers.

3.5.3 Switching comment/no-comment display

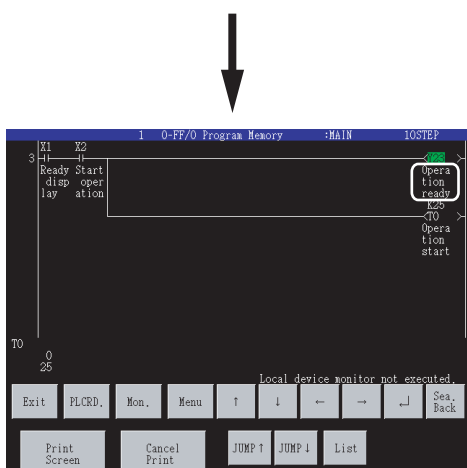
Comments written in the target controller are displayed. Comment display and no-comment display switch alternately each time you press the **[Cmnt.]** key.



1 Touch **[Menu]**.




2 Touch **[Cmnt.]**.



3 Comments are displayed.
Each comment is displayed in five characters on three lines.



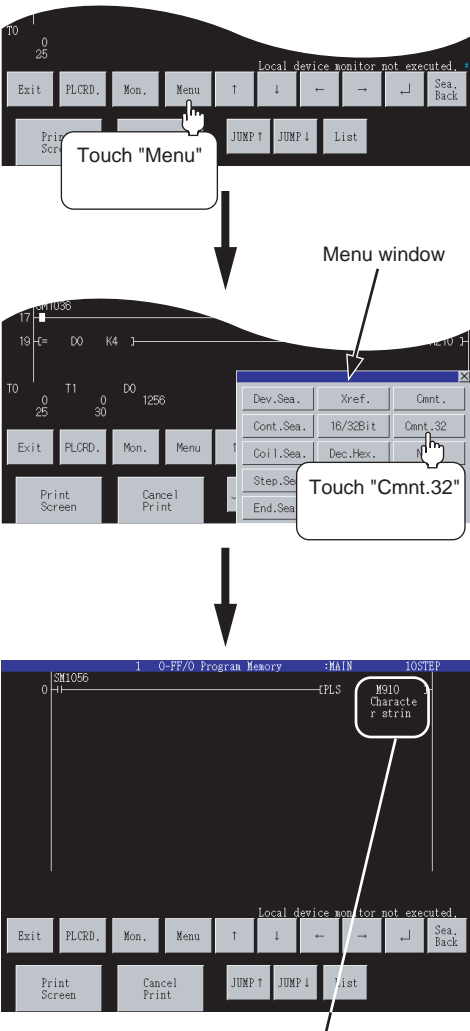
Point Priority of comment display

- (1) For the MELSEC-Q/QnA ladder monitor
Either of Common Comment or Comment by program can be selected.
For the setting of comment display priority, refer to the following manual.
 GT16 User's Manual (11.2.1 Q/QnA Ladder Monitor)
 GT15 User's Manual (11.7 Q/QnA Ladder Monitor)
- (2) For the MELSEC-A ladder monitor
The comment display priority is as follows.
Extension comment > Comment in Kanji or kana

3.5.4 Displaying 32 characters of comments

Comments can be displayed in 32 characters when the MELSEC-Q/QnA ladder monitor is executed. They are not displayed when the MELSEC-A/FX ladder monitor is executed.

(1) Procedure for displaying 32 characters of comments



1 Touch **Menu**.

2 Touch **Cmnt.32**.

3 Comments are displayed in 32 characters. A comment is displayed in eight characters on four lines.

Display example of 32 characters of comment
A comment is displayed in eight characters on four lines.

(2) Comment display when the MELSEC-Q/QnA ladder monitor is executed

Comments are displayed as shown below when you touch each of the **[Cmnt.]** and **[Cmnt.32]** keys.

Present comment display status	Key operation	Comment display after key operation
No comments displayed	Touch the [Cmnt.] key.	Comments displayed
	Touch the [Cmnt.32] key.	32 characters of comments displayed
Comments displayed	Touch the [Cmnt.] key.	No comments displayed
	Touch the [Cmnt.32] key.	32 characters of comments displayed
32 characters of comments displayed	Touch the [Cmnt.] key.	Comments displayed
	[Cmnt.32] key.	No 32 characters of comments displayed

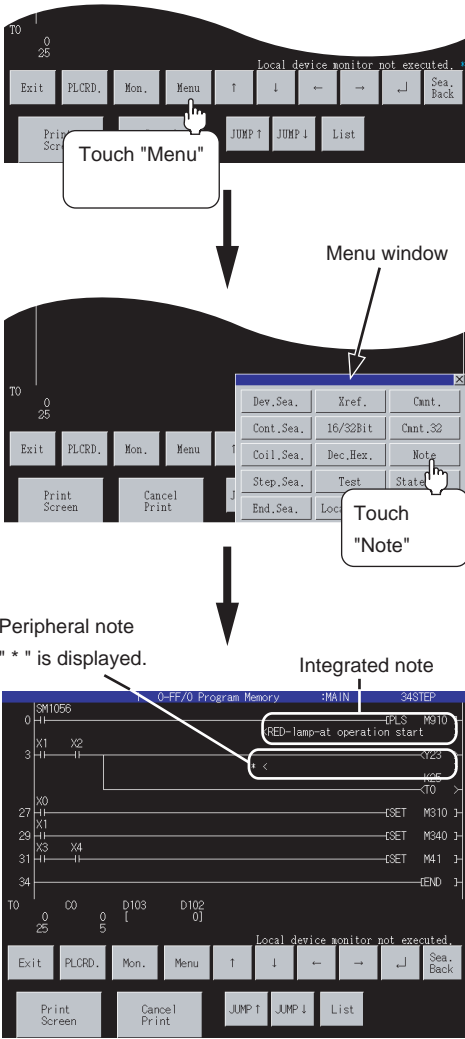
(3) Numbers of lines and contact points that can be displayed when the MELSEC-Q/QnA ladder monitor is executed

The table below shows the numbers of lines and contact points that can be displayed in the statuses of no comments displayed, comments displayed, and 32 characters of comments displayed.

GOT	No comments displayed		Comments displayed		32 characters of comments displayed	
	Number of lines that can be displayed	Maximum number of contact points displayed	Number of lines displayed	Maximum number of contact points displayed	Number of lines displayed	Maximum number of contact points displayed
GT1695M-X GT1685M-S GT1595-X GT1585V-S GT1585-S GT1575V-S GT1575-S	15	11	6	11	5	6
GT1575-V GT1575-VN GT1572-VN GT1565-V GT1562-VN	8	11	3	11	2	6

3.5.5 Displaying notes

Notes in the sequence program can be displayed when the MELSEC-Q/QnA ladder monitor is executed. This subsection describes the operation procedure for displaying notes. Notes cannot be displayed when the MELSEC-A/FX ladder monitor is executed. Peripheral notes are represented by " * ".



1 Touch **Menu** .

2 Touch **Note** .

3 Peripheral/Integrated notes are displayed.

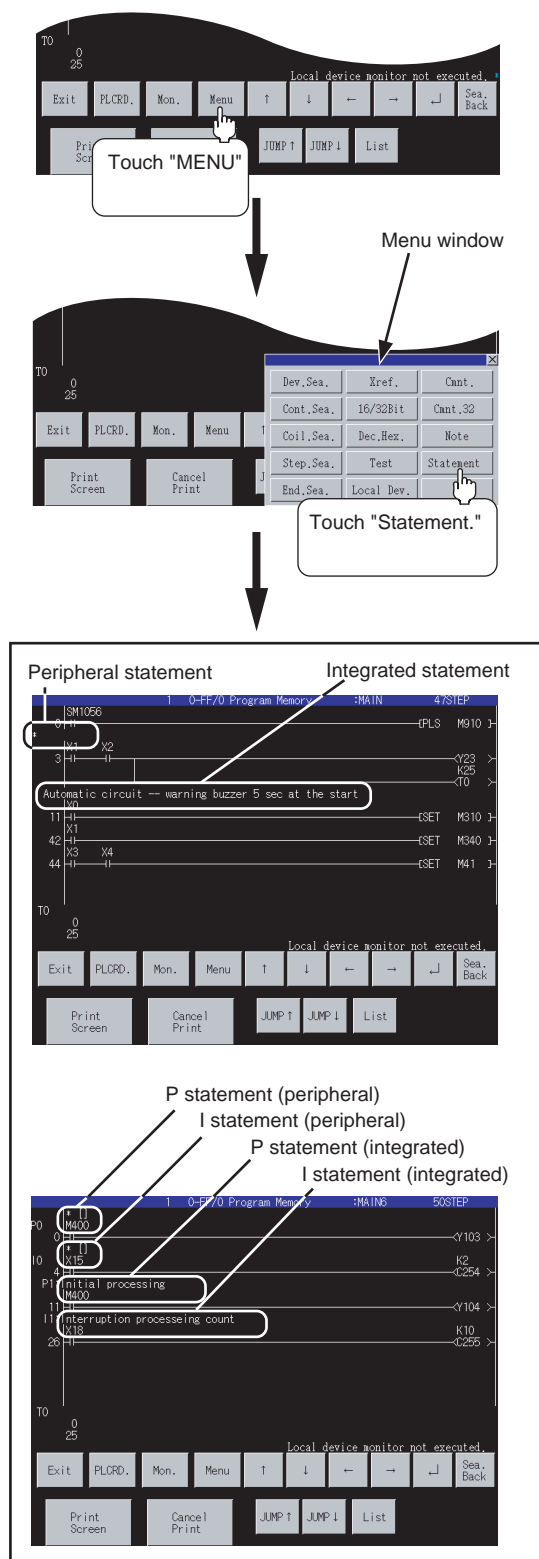
3.5.6 Displaying statements

Statements in the sequence program can be displayed when the MELSEC-Q/QnA ladder monitor is executed. This subsection describes the operation procedure for displaying statements.

Statements cannot be displayed when the MELSEC-A/FX ladder monitor is executed.

The following statements cannot be displayed and are represented by "*".

- Peripheral statements
- I statements (peripheral) and P statements (peripheral)



1 Touch **Menu** .

2 Touch **Statement** .

3 Peripheral/Integrated statements are displayed.
Peripheral statements are represented by "*" .

4 I/P statements are displayed.
I statements (peripheral) and P statements (peripheral) are represented by "*" .

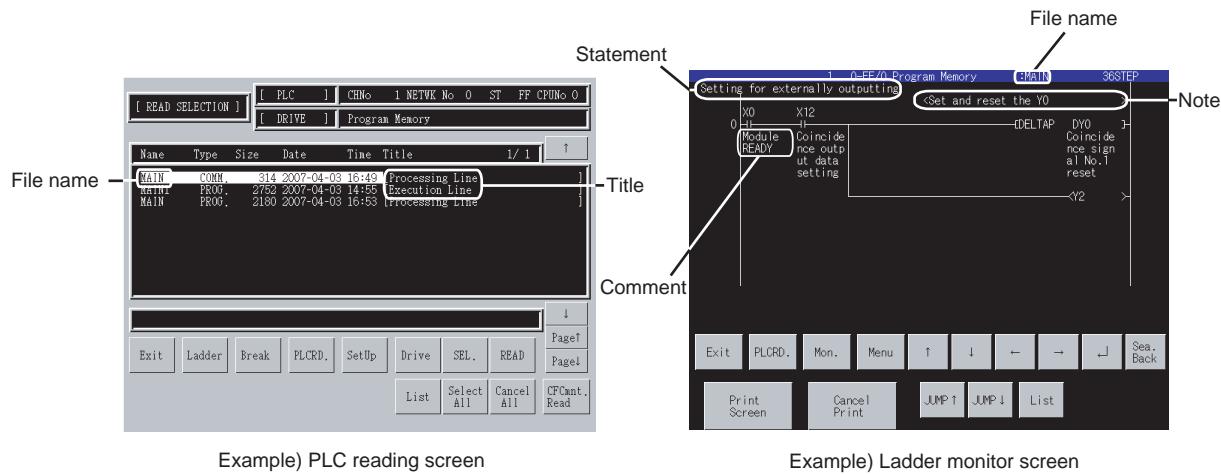
3.5.7 Language switching of the sequence program (MELSEC-Q/QnA ladder monitor)

In the MELSEC-Q/QnA ladder monitor, language switching (Japanese/Korean) is available for displaying the following items of a sequence program.

(To switch the language, register the following items with the language (Japanese/Korean) used for the PLC READING DATA DISPLAY. To display Korean, for example, register the following items with Korean on GX Developer.)

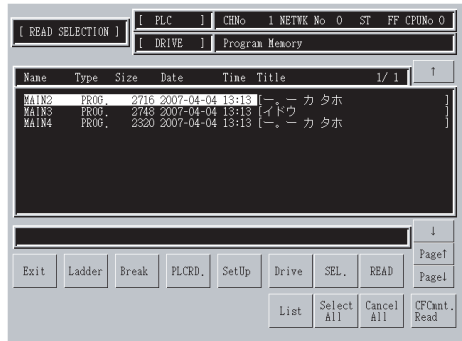
- File name
- Title
- Comment
- Note
- Statement

Items other than the above (such as menu) are displayed with the language set on [GOT setup].



Display procedure for the PLC reading screen
Subsection 3.3.3 2

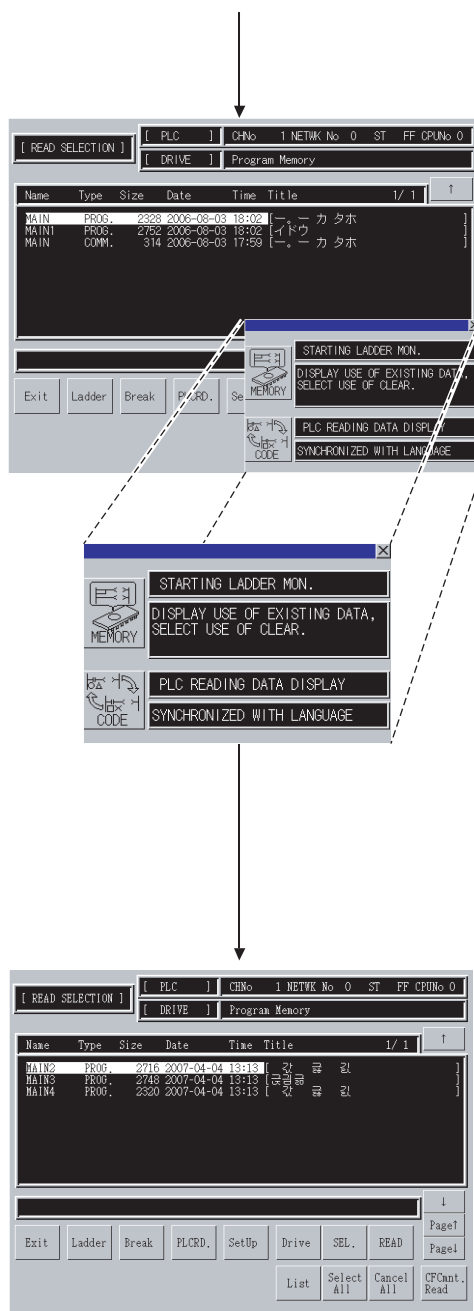
PLC reading screen




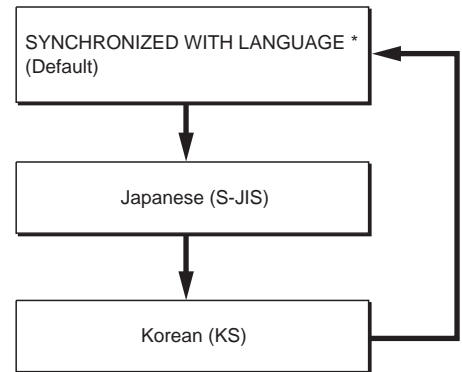
(Continued to next page)

- 1 Touch the **SetUp** key. The setting window appears.


(From previous page)



- 2 The setting window appears. Perform the PLC READING DATA DISPLAY. The settings shown below switch with every touching of the  key.



* The language set at [GOT setup] is displayed.

- 3 After completing the setting, touch the  button to close the setting window.
- 4 The display is switched.

3.6 Search Operation

This section describes device search, contact point search, coil search, step search, ladder end search, defect search, and touch search.



(1) Searching among multiple programs

Search can be performed to multiple sequence programs read from PLC CPU.
For searchable items among multiple programs, refer to the following section.



3.2 Specifications

(2) Searching in the specified program (only for the MELSEC-Q/QnA ladder monitor)

Search can be automatically performed to a program by specifying the file to be searched with a object such as the Special Function Switch.

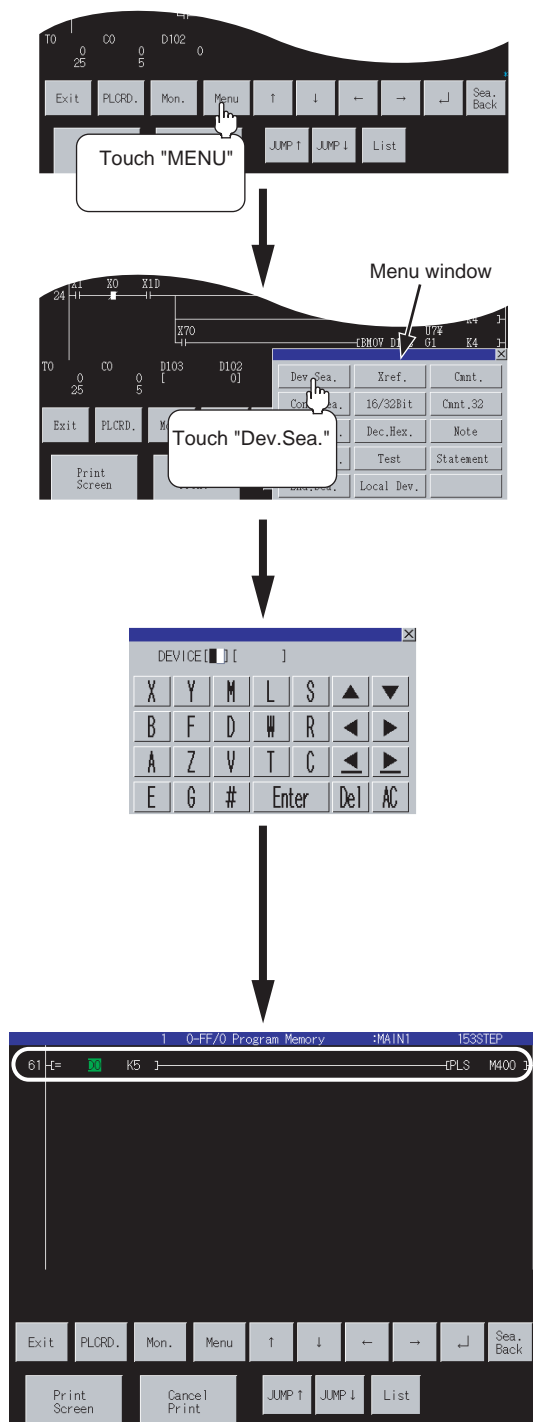


3.3.4 Searching from the monitor screen

3.6.1 Device search

Device search displays the ladder block that contains a specified device.

<Operation procedure>



1 Touch **Menu** .

2 Touch **Dev.Sea.** .

3 Using the ◀ and ▶ keys, switch the input area, and enter a device name and its number. *1
Example: Specify D0.

4 After the device name and its number are entered, touch the **Enter** key. Input is completed, and the keyboard closes.

*1 The data entered can be corrected with the following keys:



Del key: Used to delete a character of the entered information.

AC key: Used to delete all characters entered.

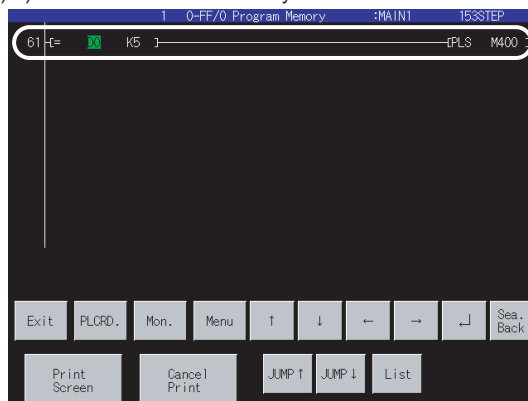
5 The ladder block containing the specified device is displayed.
The device is highlighted as shown in the display example below.
(Display example)

D0

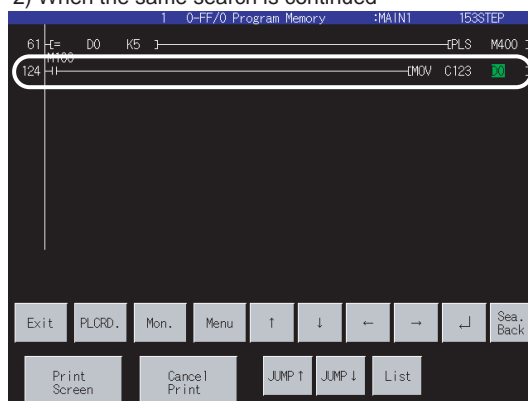


- (1) Continuous read based on the same device
After a search, a continuous search can be performed based on the same device by touching  on the screen.
If you touch  another key, the continuous read function will be canceled.
- (2) Ladder monitor display after a search
The ladder block containing the searched device is displayed.

Example) 1) When the entered device you want to search is "D0"

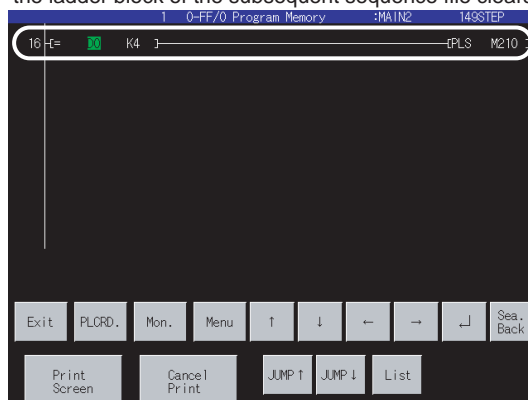


2) When the same search is continued



The ladder is displayed on the following line.

When searching multiple files with the MELSEC-Q/QnA ladder monitor, displaying the ladder block of the subsequent sequence file clears the previous display.



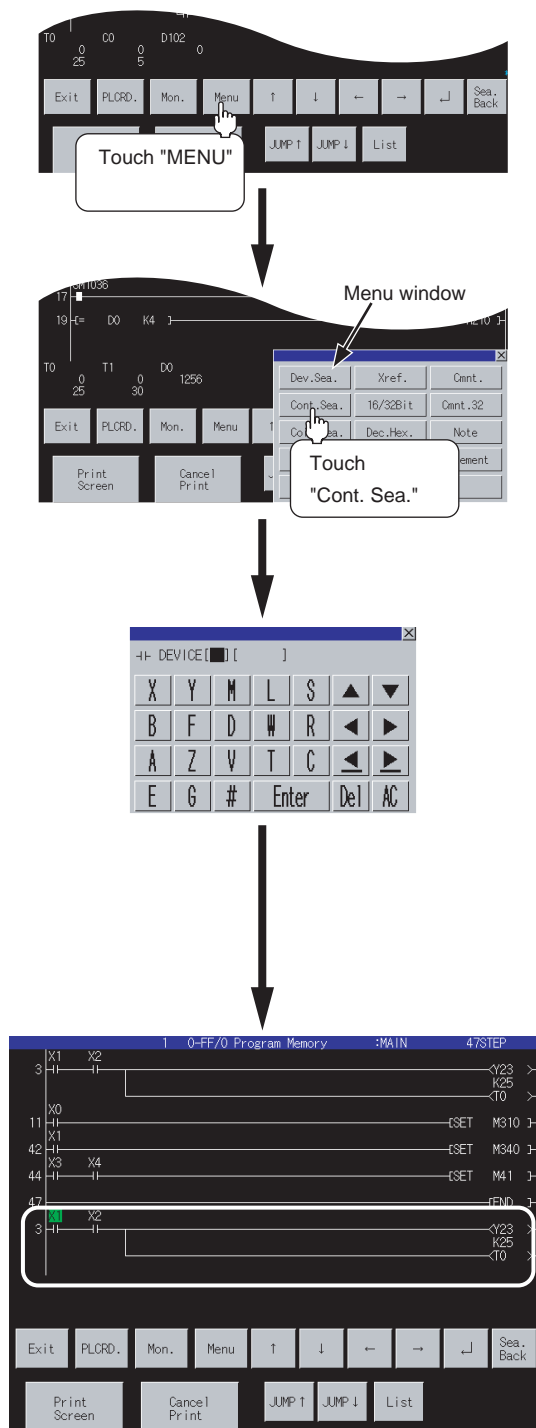
Only the ladder block(s) found in the subsequent sequence file is displayed.

- (3) Indirect specification device read
Indirect specification devices (index register (Z)) cannot be specified and read when the MELSEC-Q/QnA ladder monitor is executed.

3.6.2 Contact point search

Contact search displays the ladder block that contains a specified contact point.

<Operation procedure>



1 Touch **Menu**.

2 Touch **Cont.Sea.**

3 Using the **◀** and **▶** keys, switch the input area, and enter a device name and its number. ^{*1}
Example: Specify X1.

4 After the device name and its number are entered, touch the **Enter** key. Input is completed, and the keyboard closes.

^{*1} The data entered can be corrected with the following keys:



Del key: Used to delete a character of the entered information.

AC key: Used to delete all characters entered.

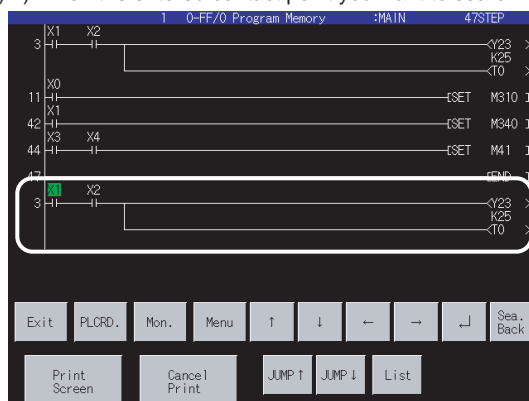
5 The ladder block containing the specified contact point is displayed.
The contact point is highlighted as shown in the display example below.
(Display example)

X1

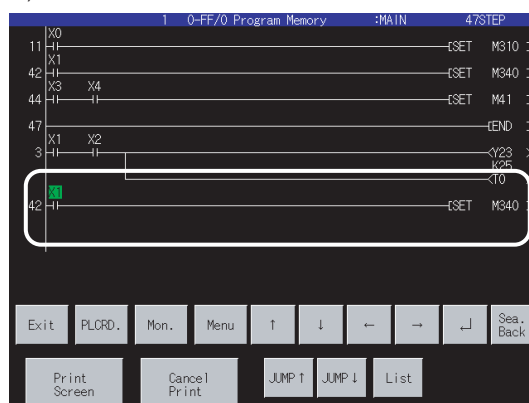


- (1) Continuous read based on the same contact point
After a search, a continuous search can be performed based on the same contact point by touching  on the screen.
If you touch another  key, the continuous read function will be canceled.
- (2) Ladder monitor display after a search
The ladder block containing the searched contact point is displayed.

Example) 1) When the entered contact point you want to search is "X1"

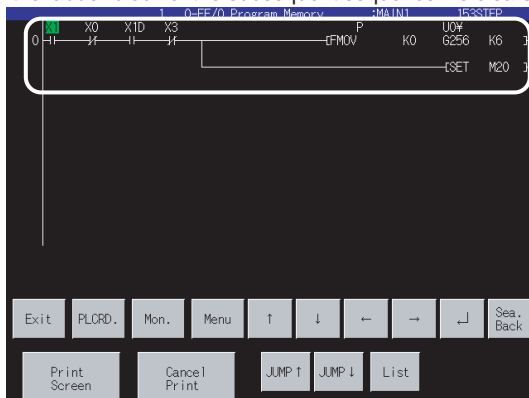


2) When the same search is continued



The ladder is displayed on the following line.

When searching multiple files with the MELSEC-Q/QnA ladder monitor, displaying the ladder block of the subsequent sequence file clears the previous display.

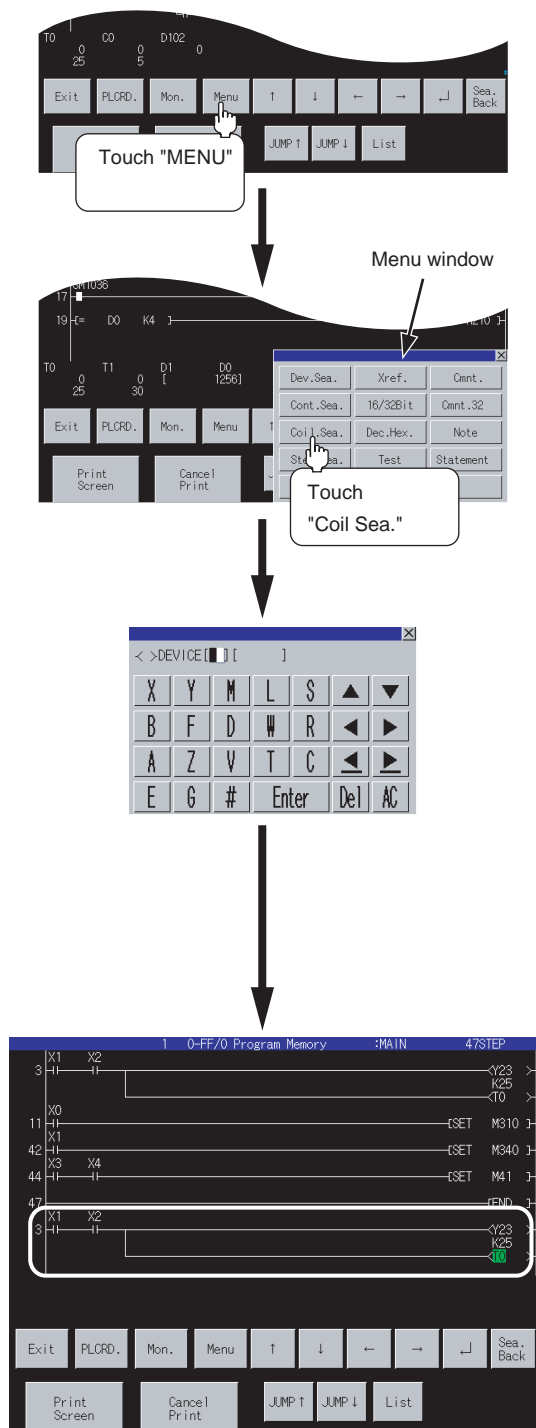


Only the ladder block(s) found in the subsequent sequence file is displayed.

3.6.3 Coil search

Coil search displays the ladder block that contains a specified coil.

<Operation procedure>



1 Touch **Menu**.

2 Touch **Coil.Sea.**.

3 Using the ◀ and ▶ keys, switch the input area, and Enter a device name and its number.*1
Example: Specify T0.

4 After the device name and its number are entered, touch the **Enter** key. Input is completed, and the keyboard closes.

*1 The data entered can be corrected with the following keys:



Del key: Used to delete a character of the entered information.

AC key: Used to delete all characters entered.

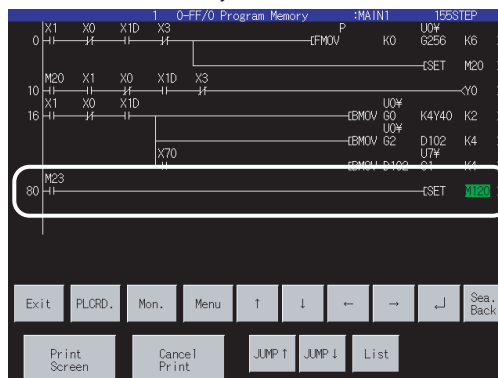
5 The ladder block containing the specified coil is displayed.
The coil name is highlighted as shown in the display example below.
(Display example)

T0

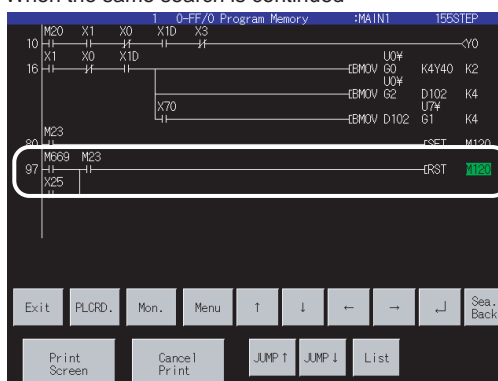


- (1) Continuous read based on the same coil
After a search, a continuous search can be performed based on the same coil by touching  on the screen.
 If you touch another key, the continuous read function will be canceled.
- (2) Ladder monitor display after a search
The ladder block containing the searched coil is displayed.

Example) 1) When the entered coil you want to search is "M120"

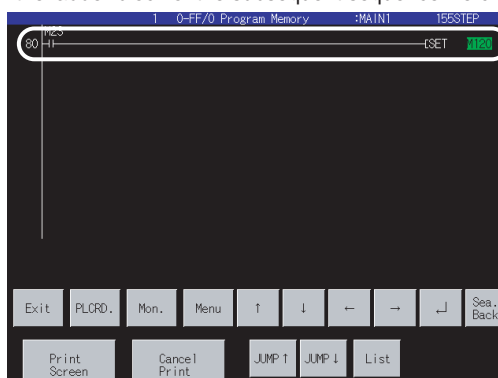


2) When the same search is continued



The ladder is displayed on the following line.

When searching multiple files with the MELSEC-Q/QnA ladder monitor, displaying the ladder block of the subsequent sequence file clears the previous display.

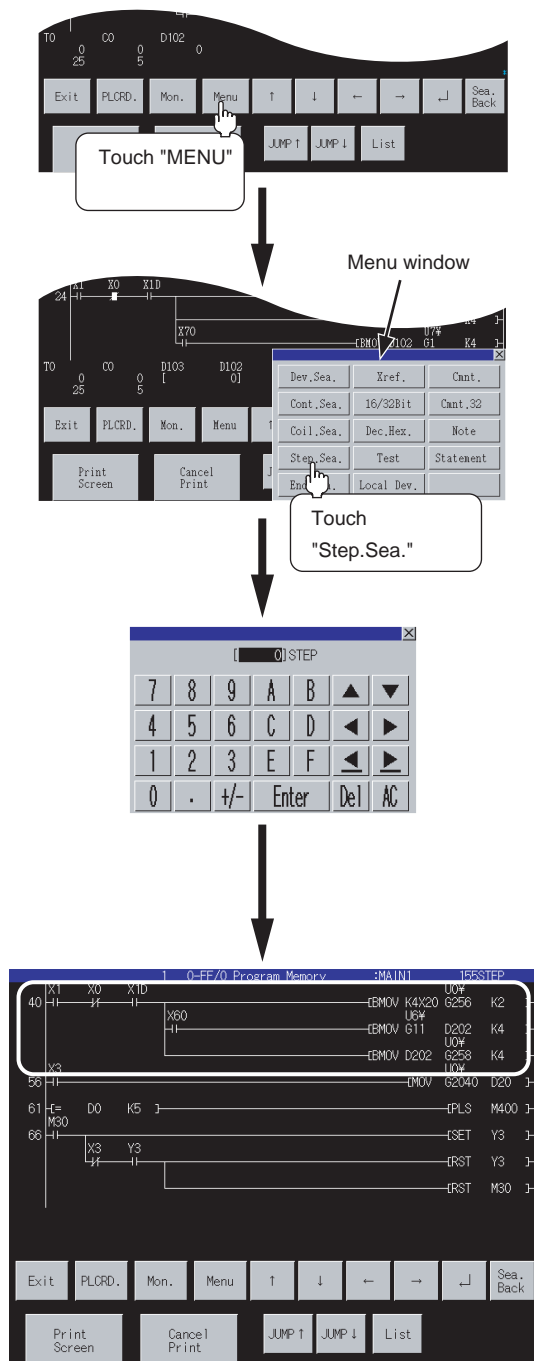


Only the ladder block(s) found in the subsequent sequence file is displayed.

3.6.4 Step search

Step search displays the ladder block that contains a specified step number.

<Operation procedure>



1 Touch **Menu** .

2 Touch **Step.Sea.** .

3 Enter a step number.*¹
Example: Specify step No. 40.

4 After the step number is entered, touch the **Enter** key. Input is completed, and the keyboard closes.

*1 The data entered can be corrected with the following keys:

Del key: Used to delete a character of the entered information.

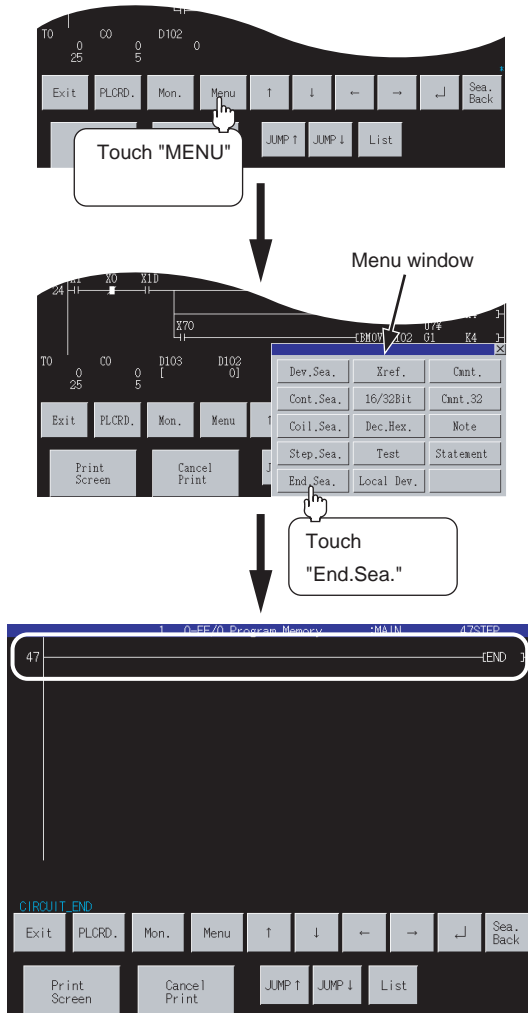
AC key: Used to delete all characters entered.

5 The ladder block is displayed with the specified step number at the top.
(Display example)
The ladder block of step No. 40 is displayed.

3.6.5 Ladder end search

Ladder end search displays the last ladder block of the sequence program.

<Operation procedure>



1 Touch **Menu**.

2 Touch **End.Sea.**.

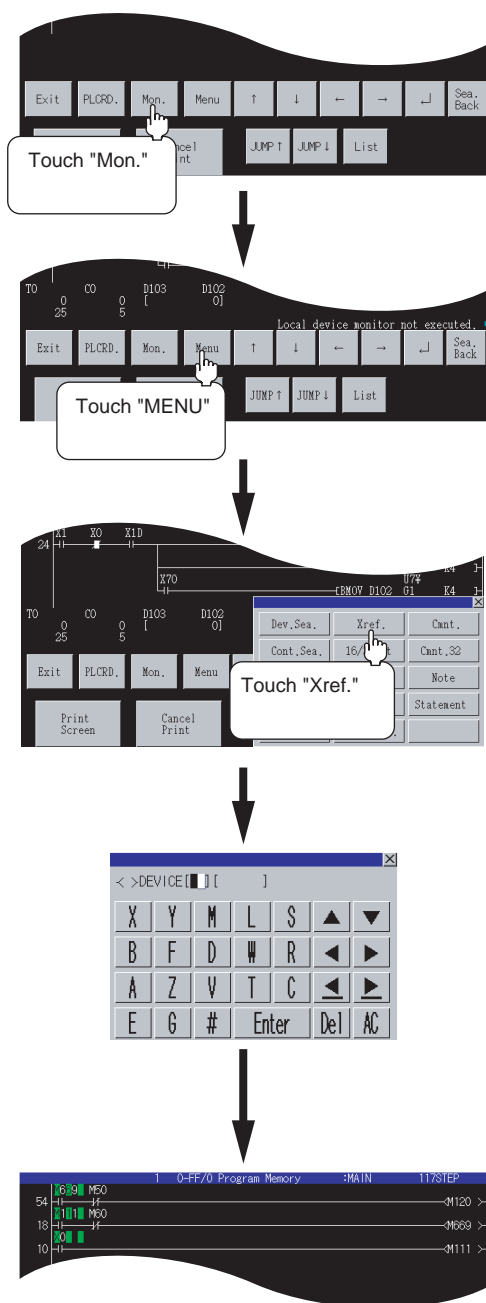
3 The last ladder block of the sequence program is displayed.

- MELSEC-Q/QnA ladder monitor
The ladder block of the end command is displayed.
- MELSEC-A/FX ladder monitor
The last ladder block is displayed (the end command is not displayed).
The message "CIRCUIT_END" will be displayed.

3.6.6 Defect search

Defect search searches the ladder block for the status of conductive/non-conductive of the contact point that turned on or off the coil on the sequence program.

<Operation procedure>



1 Touch **Mon.**

2 Touch **Menu**

3 Touch **Xref.**

4 Select a coil, if necessary.

Using the ◀ and ▶ keys, switch the input area, and enter the device name and its number of the selected coil.*1

Example: Specify M120.

5 After the device name and its number are entered, touch the **Enter** key. Input is completed, and the keyboard closes.

*1 The data entered can be corrected with the following keys:

Del key: Used to delete a character of the entered information.

AC key: Used to delete all characters entered.

6 A search for the device begins, and the research result is displayed.

To cancel a defect search, touch **ESC**.

During a defect search, all key operations except **ESC** and **Exit** are invalid.



Operation before a defect search

In the case of the MELSEC-A/FX ladder monitor, touch **Mon.** before starting a defect search.

If you touch **Xref.** without touching **Mon.**, the message "NO MONITORING" will be displayed.

(1) Search result

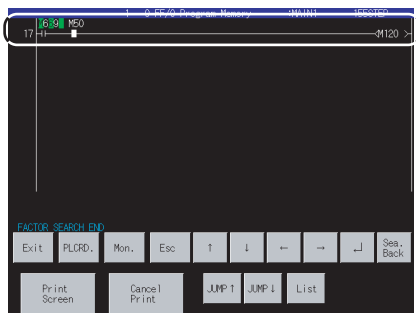
Search results reveal any occurrences of the search device. They are useful when you determine whether a defective device is conductive or nonconductive.

If any occurrence of the search device is not found as a result of the search, a message appears on-screen, telling that "PROGRAM NOT FOUND."

(a) When an occurrence of the search device is found:

If an occurrence of the search device is found as a result of the search, the search for another defective device will automatically be started.

Example: After searching for Device M120 that is in the OFF state, "M669" will be displayed as a device that caused a failure.

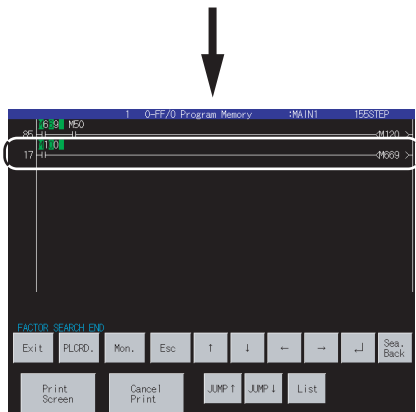


After searching for Coil M120 that is in the OFF state, "M669" is displayed as a device that is not conductive.

Example: **M669**

* After searching for a device that is in the ON state, a device that is conductive is displayed. The entire field of the device name and number is highlighted on-screen.

Example: **M669**



After searching for Coil M669 that is in the OFF state, "M111" is displayed as a device that is not conductive.

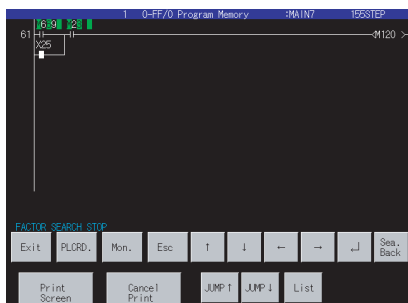
Example: **M111**

The next defect is automatically searched.

When there is no more defect, the "FACTOR SEARCH STOP" will be displayed, and the defect search will end.

- (b) When two occurrences of the search device are found.
If there are two or more devices that caused a failure, the "the defect search is interrupted" message appears and the defect search is terminated.

Example: After searching for Device M120 that is in the OFF state, "M669" and "M23" will be displayed as devices that caused a failure.



After searching for coil M120 that is in the OFF state, "M669" and "M23" are displayed as devices that are not conductive.

Example: **M669**, **M23**

* After searching for a device that is in the ON state, devices that are conductive are displayed. The entire field of the device name and number is highlighted on-screen.B

Example: **M669**, **M23**

When resuming the defect search, specify either of the found contacts M669 and X0025. After touching **[ESC]** to change it into **[Menu]**, execute the defect search.



Precautions for making defect search

- (1) When the contact point searched is a b contact point
If a B-contact is found defective as a result of the defect search, a search for the cause of the ON/OFF state will be automatically switched.
- (2) Screen display after a defect search
After the end of the defect search, the GOT stops monitor and displays the search result.
Hence, the monitor screen of the GOT shows the result retained during the defect search.
- (3) Display of defect search results
While the search result is displayed after the end of the defect search, the searched ladder can be displayed backwards by pressing **[↑]** **[↓]** (single ladder block scroll) or **[JUMP↑]** **[JUMP↓]** (10 ladder block jump (available for only the MELSEC-Q/Qn ladder monitor)).
Up to 100 ladders can be displayed on-screen. The following messages will appear at the start or the end of the search results.
 - When viewing the start of search results: "This is the start of search results."
 - When viewing the end of the search results: "This is the end of search results."
- (4) Display of contact point and coil ON/OFF
 - 1) During automatic search execution
 - MELSEC-A/FX ladder monitor: Displays ON/OFF in the entire ladder displayed on the screen.
 - MELSEC-Q/QnA ladder monitor: Displays ON/OFF in the ladder displayed last.
 - 2) During search result display
The ON/OFF of the ladder block searched last and the monitor results of word devices are displayed.

(5) Switching the Menu / ESC key switch

When the defect search starts, Menu change into ESC.

Touch ESC during the defect search to stop the defect search and display the search result.

Further, touch ESC to change ESC into Menu and display the normal ladder.

(6) Screen display during a defect search

1) If the display data exceeds one screen during the defect search

The screen is scrolled automatically.

2) If the ladder step searched during the defect search exceeds one screen

- MELSEC-A/FX ladder monitor: The screen is scrolled automatically to the last line of the ladder step.
- MELSEC-Q/QnA ladder monitor: The screen is not scrolled automatically to display the ladder step.

(7) Screen display when you touch the ESC key

Touching ESC can stop the defect search. Search results are continuously displayed on-screen until ESC is touched.

The ladder step searched last is displayed as described below.

- MELSEC-A/FX ladder monitor: ON/OFF display is not provided.
- MELSEC-Q/QnA ladder monitor: ON/OFF display is provided.

3.6.7 Touch search

Touch search is a function to search the coil of the same device by touching a contact point displayed on the ladder monitor screen, or to search the contact point of the same device by touching a coil.

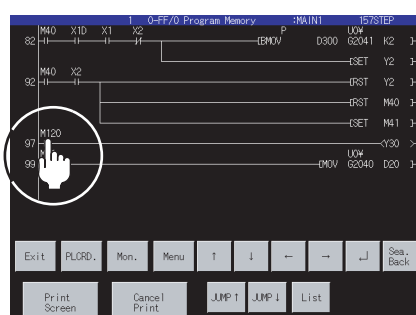
You can search sequence program from the first to last steps.

This function is valid whenever a ladder monitor is normally displayed.

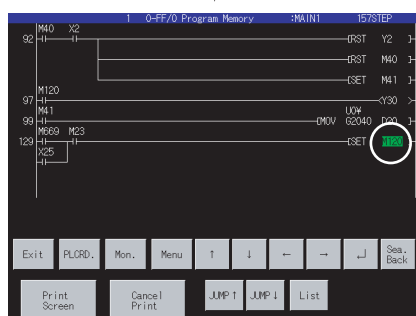


- Touch search is not available when the MELSEC-A/FX ladder monitor is executed.
- Touch search is not available for commands or word devices except contact points and coils.
- Touch search is not available when defect search is used.
(To use touch search, touch **ESC** to deactivate defect search.)

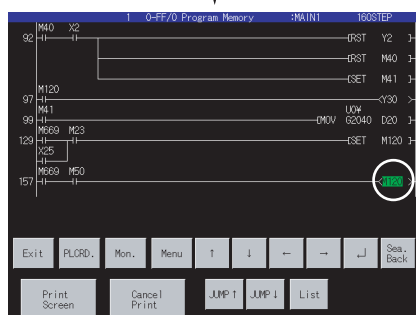
(1) Contact point search → coil search




- 1 Touch a contact point on the screen.
Touch example: M120



- 2 The coil of the same device in which the contact point exists is searched, and the ladder block containing the searched coil is added to the ladder blocks displayed.
(The searched device is highlighted.)
Display example: **M120**

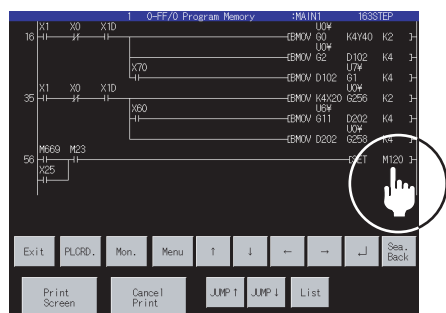


- 3 You can continuously search the ladder in the downward direction by touching .

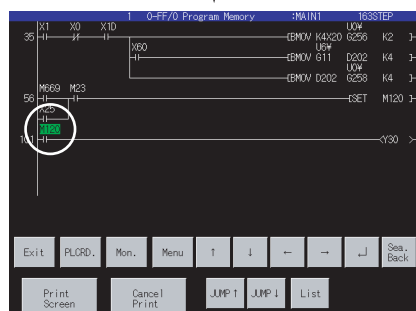
The next coil is displayed.

- 4 When there is no more contact point of the same device in which the touched contact point exists, the message "DEVICE NOT FOUND" will be displayed.

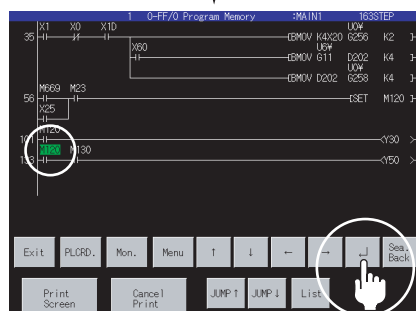
(2) Operation procedure (coil touch → contact point search)




1 Touch a coil on the screen.

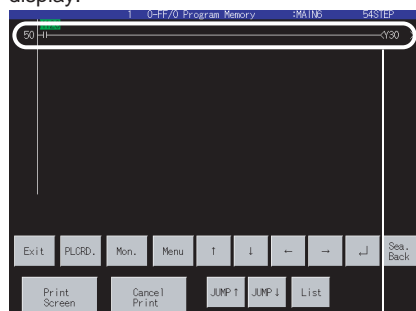


2 The contact point of the same device in which the coil exists is searched, and the ladder block containing the searched contact point is added to the ladder blocks displayed.
(The searched device is highlighted.)



3 You can continuously search the ladder in the downward direction by touching .

When searching multiple files with the MELSEC-Q/QnA ladder monitor, displaying the ladder block of the subsequent sequence file clears the previous display.




Only the ladder block(s) found in the subsequent sequence file is displayed.

next contact point is displayed.

4 When there is no more contact point of the same device in which the touched coil exists, the message "DEVICE NOT FOUND" will be displayed.

3.7 Test Operation

You can change device values and turn on and off bit devices on the screen when the ladder monitor is executed. This section describes how to display the test menu screen. For the procedure for changing device values and turning on and off bit devices, see the following.

 Section 2.9 Test Operation

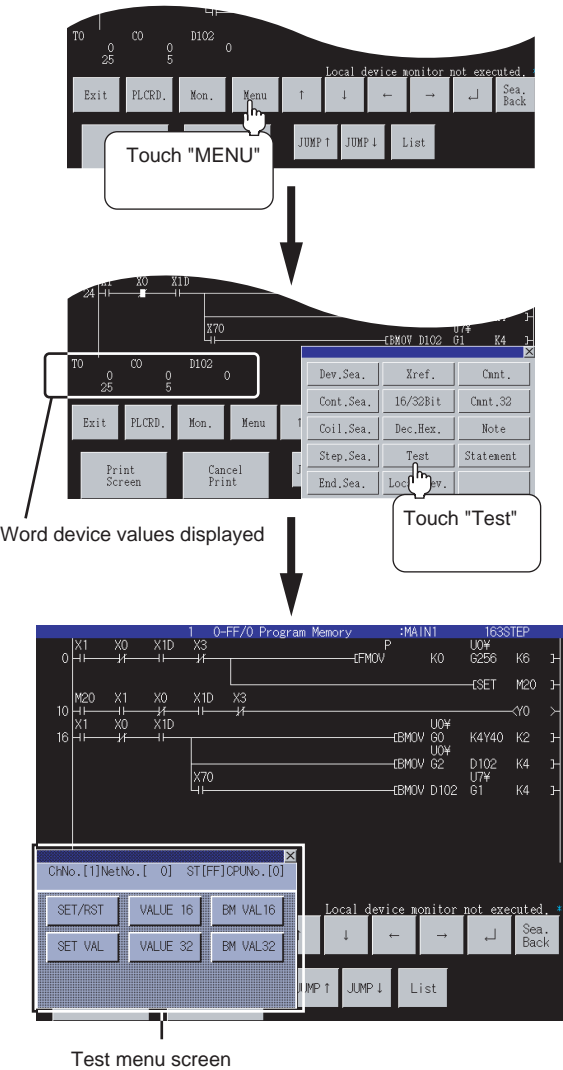


Before test operation

Timer and counter values cannot be changed during MELSEC-FX ladder monitoring.
With the MELSEC-Q/QnA ladder monitor function, the GOT cannot write data to the devices in the QSCPU.

3.7.1 Displaying the test menu screen


- (1) Displaying the test menu screen
The procedure for displaying the test menu screen during ladder monitoring is described below.





- 1 Touch **Menu**.

- 2 Touch **TEST**.

- 3 The test menu screen is displayed. Change device values by operating the window.
For further information about the operation procedure, see the following:

 Section 2.9 Test Operation



The present and set values of word devices are hidden behind the test menu screen. You can display hidden present and set values by scrolling them to the right or left using the  or  key.

3.8 Local Device Monitor

The GOT can monitor local devices with the MELSEC-Q ladder monitor.
For local devices, refer to an applicable programmable controller manual.



Monitoring local devices

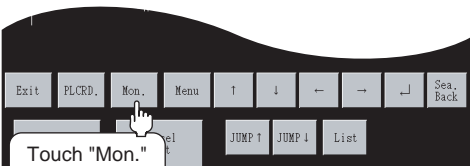
Local devices can be monitored only with the ladder monitor.
Operations for monitoring local devices cannot be executed on the user-created screen.

3.8.1 Operation procedure for local device monitor

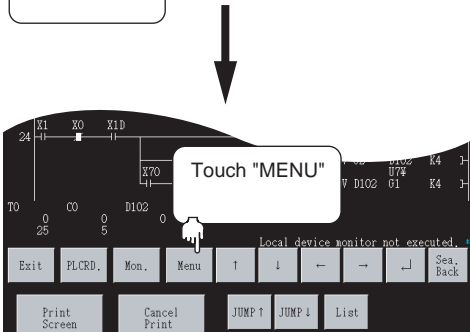
Every time the **Local Dev.** key is pressed, the local device monitor is switched between execution and non-execution states.

1 Starting local device monitor

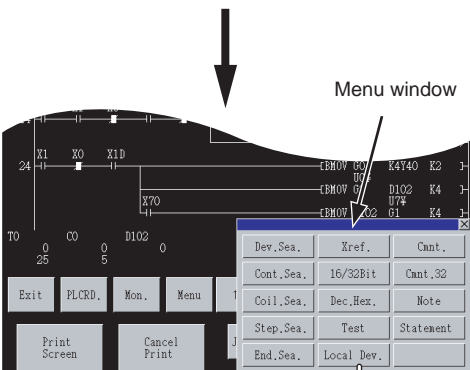
The following shows how to start the local device monitor.



1 Touch **Mon.** .



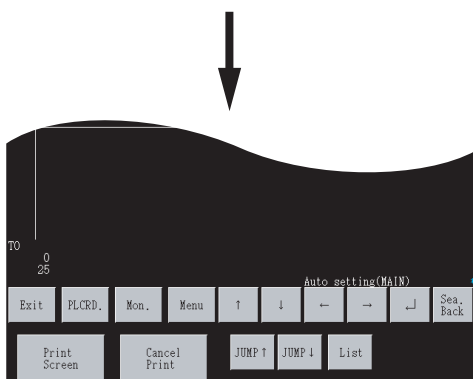
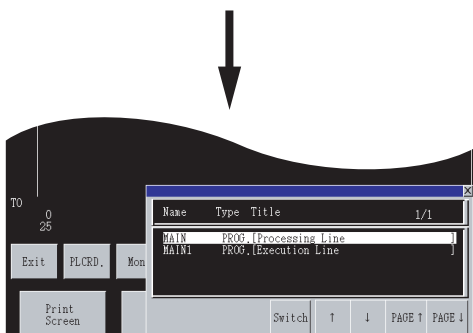
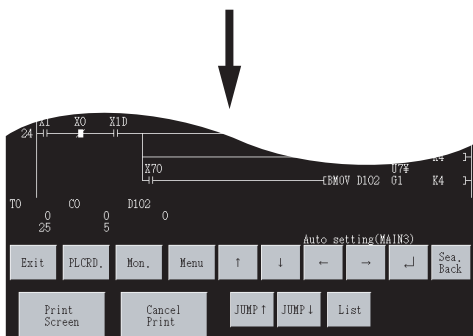
2 Touch **Menu** .



3 Touch **Local Dev.** .

(Continued to next page)

(From previous page)



How to monitor local devices when ladder monitor starts

With setting the GOT setup, the GOT can start monitoring local devices when the ladder monitor starts.

For settings for monitoring local devices when the ladder monitor starts, refer to the following manual.



GT16 User's Manual (Section 11.2.1 Q/QnA Ladder Monitor)

GT15 User's Manual (Section 11.7 Q/QnA Ladder Monitor)

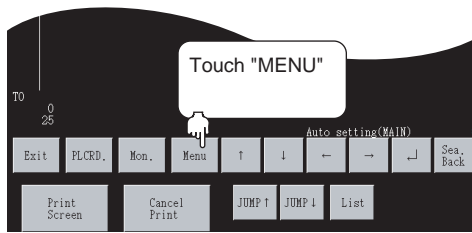
4 The local device monitor is started.

5 For changing a sequence program to be monitored, touch **List**, and then change sequence programs on the program list window.

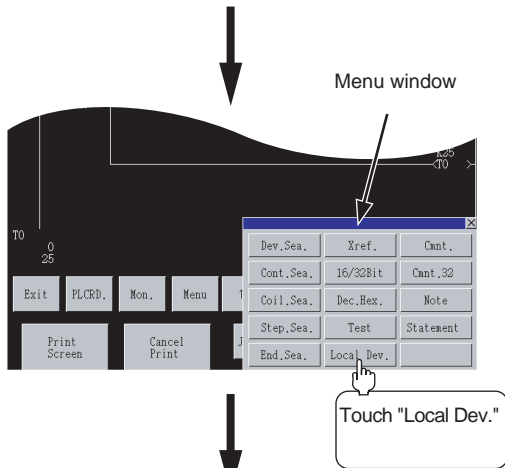
6 The local device monitor is started with the changed sequence program.

2 Ending local device monitor

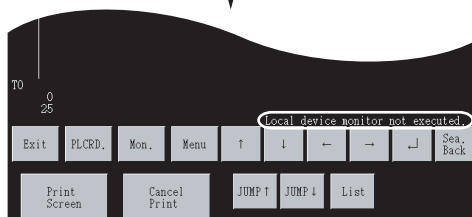
The following shows how to end the local device monitor.



1 Touch **Menu**.



2 Touch **Local Dev.**.



3 End the local device monitor.

The local device monitor is ended with the following operations.

- When touching **Exit** key
- When touching **PLCRD.** key



When ladder monitor screen is switched to other screens during executing local device monitor

When the ladder monitor screen is switched to other screens because of communication errors and others during monitoring local devices, the GOT keeps monitoring local devices.

For switching the local device monitor to non-execution state, restart the ladder monitor, and then switch the local device monitor to non-execution state.

(Continued to next page)

3.9 Error Messages and Corrective Action

This section describes the error messages displayed when the ladder monitor function is executed, and corrective action.

Error message	Description	Corrective action
ENTRY CODE MISMATCH	The specified keyword is different from the keyword that is registered in the object PLC CPU.	Check the keyword that is registered in the object PLC CPU and specify again.
FILE NOT FOUND	(1) An attempt was made to switch to the ladder monitor screen when a sequence program had not been read. (2) When the file is selected and the "Read" key is pressed, the selected file does not exist in the PLC drive.	Read the sequence program that written in the object PLC CPU. (Ex.) A sub-sequence program can only be specified as A3 CPU/A4UCPU.
PLC COMMUNICATION ERROR	(1) Cannot communicate with PLC CPU of the specified network No. or station No. (2) The specified drive does not exist.	Check and correct the following: (1) Does the specified PLC CPU exist? (2) Is it online? (Data communication status?) (3) Has an error occurred? (4) Is CPU No. correct? (5) Power on the GOT again. and so on.
LOCK ON OTHER MACHINE. PLEASE CANCEL	File is locked with the peripheral equipment (GX Developer, GPPQ).	After reading and writing with the peripheral equipment (GX Developer, GPPQ), read the file again.
NOT EXISTING DRIVE, DRIVE ERROR	(1) The specified drive does not exist. (2) The specified drive is faulty.	(1) Check whether the specified drive exists or not. (2) Check whether the specified drive is faulty or not.
ENTRY CODE MISMATCH	The specified file password differs from the one registered as the file password of the corresponding PLC CPU.	Confirm the file password registered to the drive of the corresponding PLC CPU, and specify it again.
FILE NOT FOUND	(1) When reading file from PLC CPU <ul style="list-style-type: none"> After selecting a file and pressing the "Read" key, the selected file does not exist in the PLC CPU drive. When starting ladder monitor from the monitor screen, the selected file does not exist in the PLC CPU drive. (2) When reading file from CF card <ul style="list-style-type: none"> No CF cards are inserted in the specified drive. No comment files are stored in the CF card. 	(1) When reading file from PLC CPU <ul style="list-style-type: none"> Perform [Read from PLC] on the network No./station number input screen to update the file list. Change the specified drive (Target memory). Check the sequence program in the PLC CPU. (2) When reading file from CF card <ul style="list-style-type: none"> Check if a CF card is inserted in the specified drive. Check if comment files are stored in the CF card.
USE BY OTHER MACHINE. PLEASE CANCEL	The sequence or comment is being used by the peripheral device (GX Developer).	Perform file read again after completion of read/write from/to the peripheral device (GX Developer).
2M bytes of comments were read since they exceeded 2M bytes.	Only 2M bytes of the comment file was read because its size is greater than 2M bytes.	Reduce the comments to bring the size of the comment file down below 2 Mbytes.
Outside CPU reset/device range/ special module illegal access	The accessed special module is faulty or does not exist.	Check the system configuration.
FILE ACCESS ERROR. CONFIRM DRIVE.	The access error to file has occurred.	When the storage location of ladder data is set to [A: Standard CF Card] or [B: Extended Memory Card], check that the CF card is properly inserted. • Check if the CF card is properly inserted in the drive set for reading comment files.
INSUFFICIENT SAVING DRIVE CAPACITY.	Capacity of free disk of saving destination is insufficient.	Confirm the capacity of free disk of saving destination, increase the amount of free disk.
FILE ACCESS..<DO NOT PULL OUT THE PLUG>	File being accessed.	Do not turn off the power during message display. Wait until the message display goes out.

(Continued to next page)

Error message	Description	Corrective action
No END instruction.	The sequence program has no END instruction.	Check the sequence program with the peripheral device (GX Developer).
Instruction code abnormal.	The sequence program has an abnormal command code.	Check the sequence program with the peripheral device (GX Developer).
Ladder creation bad.	The sequence program has an abnormal circuit.	Check the sequence program with the peripheral device (GX Developer).
Please release the keyword.	Communication is not possible because a keyword is registered in the target PLC. (For FX3U(C) only)	Release the keyword for the target PLC.
THE KEYWORD IS REGISTERED.	A keyword is set to the PLC that is targeted to the PLC reading on the PLC reading screen.	Release the keyword for the target PLC.
Cannot read multiple files.	Data Save Location is set to [None].	(1) When reading file from PLC CPU <ul style="list-style-type: none"> • Read only one program file or one comment file. (2) When reading file from CF card <ul style="list-style-type: none"> • No CF cards are inserted in the specified drive. • No comment files are stored in the CF card.
Number of files exceeds 512. Aborting . . .	The number of read file exceeds the maximum number of files can be treated in ladder monitor (512).	Delete superfluous files and perform reading again.
This is not a specified program.	When starting ladder monitor from a monitor, the monitor target of the specified device and that of the program already read to the GOT do not match.	Read the program again.
The specified file does not exist.	An invalid program is specified during monitoring local devices.	Check the sequence program in the PLC CPU, and then read the program again.
Local device monitor error.	An error occurs during monitoring local devices.	Check the settings in the PLC CPU, and read the program again.
Local device monitor is not supported.	The PLC CPU does not support the local device monitor function.	Check manuals for the PLC CPU.

4. MELSEC-A LIST EDITOR



4.1 Features

The MELSEC-A list editor enables you to change the sequence program in the ACPU/QCPU (A mode). This function is intended to troubleshoot the PLC system and to streamline maintenance operations. By installing list editor for MELSEC-A, an Option OS, from GT Designer2 into the GOT, you can edit the ACPU/QCPU (A mode) PLC program.

The features of the MELSEC-A list editor are described below.

1 Parameters and sequence programs are easy to maintain.

You can check or partly correct, change or add PLC CPU parameters and sequence programs simply by operating keys.

You can easily edit sequence programs without preparing any peripheral unit other than the GOT.

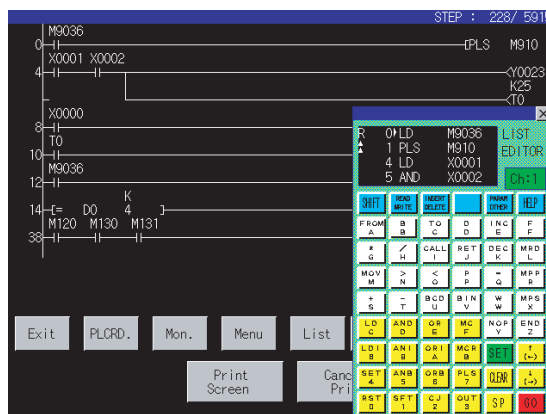
Example of changing sequence program commands

LD	X0	Changed	LD	X0	
OUT	Y20	→	MOV	D0	D1
LD	X1		LD	X1	
.	}		.	}	

2 Combination with the ladder monitor

You can open the MELSEC-A List Editor window from the Ladder Monitor screen with a single touch, and can edit PLC program while checking the ladder.

You can also display a list from the step line displayed by the ladder monitor.



3 Other stations are accessible.

You can edit the sequence program for other stations in the data link system containing the GOT (or GOT-connected station), network system or CC-Link system.

4 Help function

A convenient help function is supported, which enables you to read, write, insert, and delete data as you select menus.

5 Comment for each device can be displayed.

Comment of the device at the cursor position can be displayed.

W	9	OUT	M50
▲	10	MOV	
	10▶	D1	
		Current value	

← Comment of D1 is displayed.

4.2 Specifications

4.2.1 System configuration

This subsection describes the PLC CPU series names and the connection forms between the GOT and the PLC for which the MELSEC-A list editor is available.

For further information about communication units and cables for each connection form, see the following:

 GOT1000 Series Connection Manual

1 Targeted PLC

PLC

ACPU/QCPU (A mode)^{*1*2}

^{*1} Motion controller CPUs cannot be connected. The message "MOTION CONTROLLER NOT SUPPORTED" will be displayed when the MELSEC-A list editor function is activated.

^{*2} When the PLC is A2USH-S1, it operates within the range of A3U; when the PLC is the A2SH-S1, A2SH, A1SH, or A1SJH, it operates within the range of A3N.

2 Connection forms

When the GOT is connected to an ACPU/QCPU (A mode)

(○: Available, ×: Unavailable)

Function name	Connection form between GOT and PLC													
	Bus connection ^{*1*3}		Direct CPU connection		Computer link connection		Ethernet connection		MELSEC NET/10 connection ^{*1*2}		CC-Link connection ^{*1*2}			
											ID ^{*4}		G4 ^{*5}	
	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11	GT16/ GT15	GT11
MELSEC-A list editor	○	○	○	○	×	×	○	×	○	×	○	×	×	×

^{*1} When the PLC is the A2SH-S1/A2SH/A1SH/A1SJH, use a CPU of version E or a later version. Programs cannot be written to CPUs of version D or an earlier version.

^{*2} When the PLC is A3N, A2N-S1, A2N, or A1N, it can not be used.

^{*3} When the PLC is QCPU (A mode), it cannot be used.

^{*4} Indicates CC-Link connection (Intelligent device station).

^{*5} Indicates CC-Link connection (via G4).

3 Required option OS and option function board

The option OS and option function board shown below are required.

Option OS	OS memory space (user area)				Option function board		
	GT16		GT15	GT11	GT16	GT15	GT11
	Built-in flash memory (ROM)	User memory (RAM)					
MELSEC-A list editor	542KB	1024KB	1058KB	0KB	Not required	GT15-FNB, GT15-QFNB, GT15-QFNB16M, GT15-QFNB32M, GT15-QFNB48M, GT15-MESB48M	GT11-50FNB

(1) Option OS

Install the option OS in the above table to the GOT.

Refer to the following manual for the procedure for installing the option OS.

 GT Designer2 Version □ Basic Operation/Data Transfer Manual (8. TRANSFERRING DATA)

(2) OS memory space

The available memory space shown in the table above is required in the user area to install the option OS to the GOT.

Refer to the following manual for the procedure for checking the available memory space of the user area and information about the data using other user areas.

 GT Designer2 Version □ Basic Operation/Data Transfer Manual (8. TRANSFERRING DATA)

(3) Option function board

(a) For GT16

No option function board is required.


(b) For GT15 and GT11

Mount one of the option function boards in the above table on the GOT.

For the GOTs with a built-in option function board, refer to the following.

 1.1.2 Hardware and OS' required for each function

For how to mount an option function board on the GOT, refer to the following manual.


 GT15 User's Manual (8.10 Option Function Board)

GT11 User's Manual (8.3 Option Function Board)

4.2.2 Access range

The access range is the same as the access range when the GOT is connected to a controller.

Refer to the following manual for details of the access range.

 GT Designer2 Version □ Screen Design Manual (2.7 Controllers that can be monitored and the Access Range)

4.2.3 Precautions

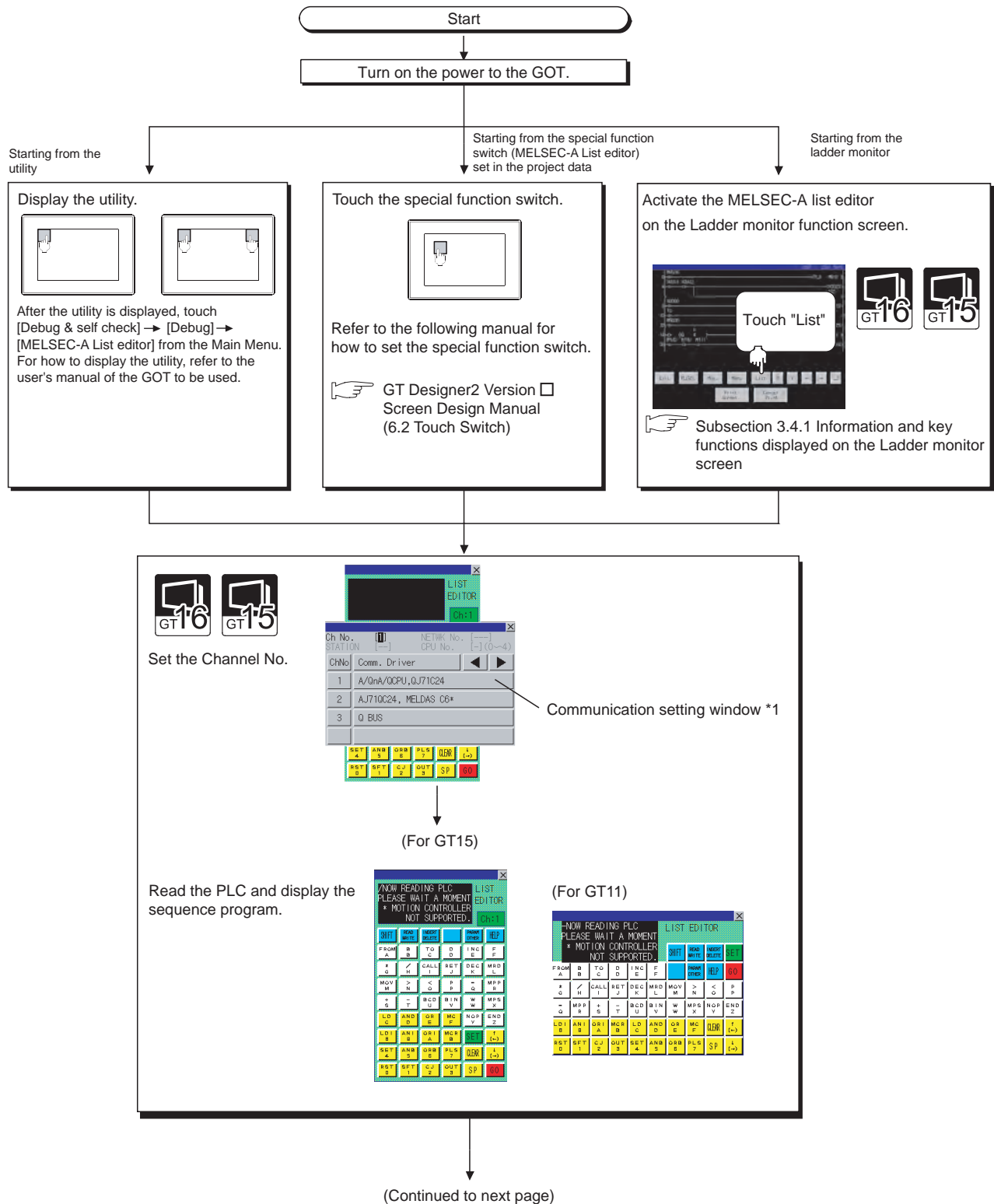
The points of precaution when using MELSEC-A list editor are described.

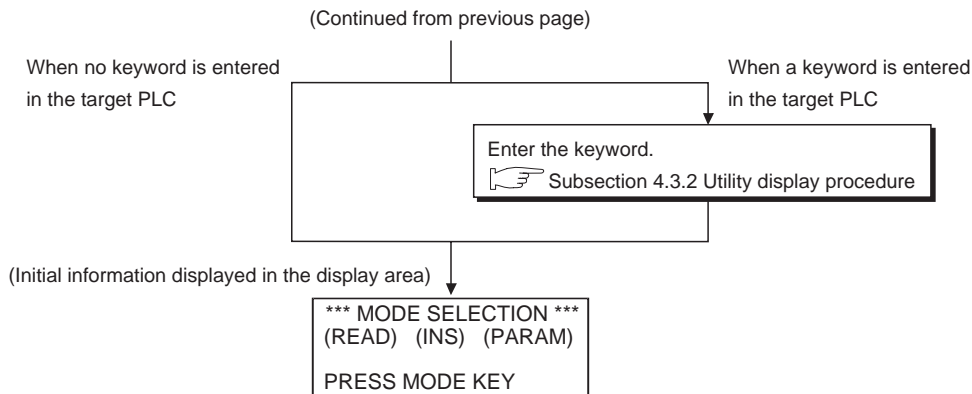
- (1) Reading the MELSEC-A list editor by specifying a command
The MELSEC-A list editor cannot be ready by specifying a dedicated command.
- (2) Using the MELSEC-A list editor together with the ladder monitor
Even if you execute the MELSEC-A list editor with the ladder monitor activated, edited information will not be reflected on the Ladder Monitor screen.
To reflect such edited information, perform the PLC reading of the ladder monitor again.
- (3) Executing the MELSEC-A list editor
Execute the MELSEC-A list editor when the target PLC is not running.
It cannot be executed when the PLC is running.
- (4) Changing sequence programs/parameters using another peripheral equipment
When using the MELSEC-A list editor, do not change programs or parameters in the PLC CPU from other peripheral equipment.
If you change programs or parameters, either reset the GOT main unit or set the PLC No. again.
If you carelessly change the program on one PLC from multiple units of peripheral equipment (including GOT), the contents of the program in the PLC CPU and the peripheral equipment may not be the same, resulting in an unintended operation of the PLC CPU.
- (5) Writing sequence programs
Sequence programs cannot be written when the target CPU is operating EEPROM.

4.3 Display

4.3.1 Outline until the start

This subsection describes an outline until the system monitor screen is displayed after List editor for MELSEC-A (Option OS) is installed in the GOT.





*1 The communication setting window is not displayed when starting from the ladder monitor.

Point

(1) How to display the utility

For how to display the utility, refer to the following.



GT16 User's manual (8.3 Utility Display)

GT15 User's manual (9.3 Utility Display)

GT11 User's manual (9.3 Utility Display)

(2) Displaying communication setting window

After turning on the GOT, the communication setting window is displayed at the first startup of the MELSEC-A list editor only.

For displaying the communication setting window at the second or later startup, touch the Ch: button on the MELSEC-A list editor screen.

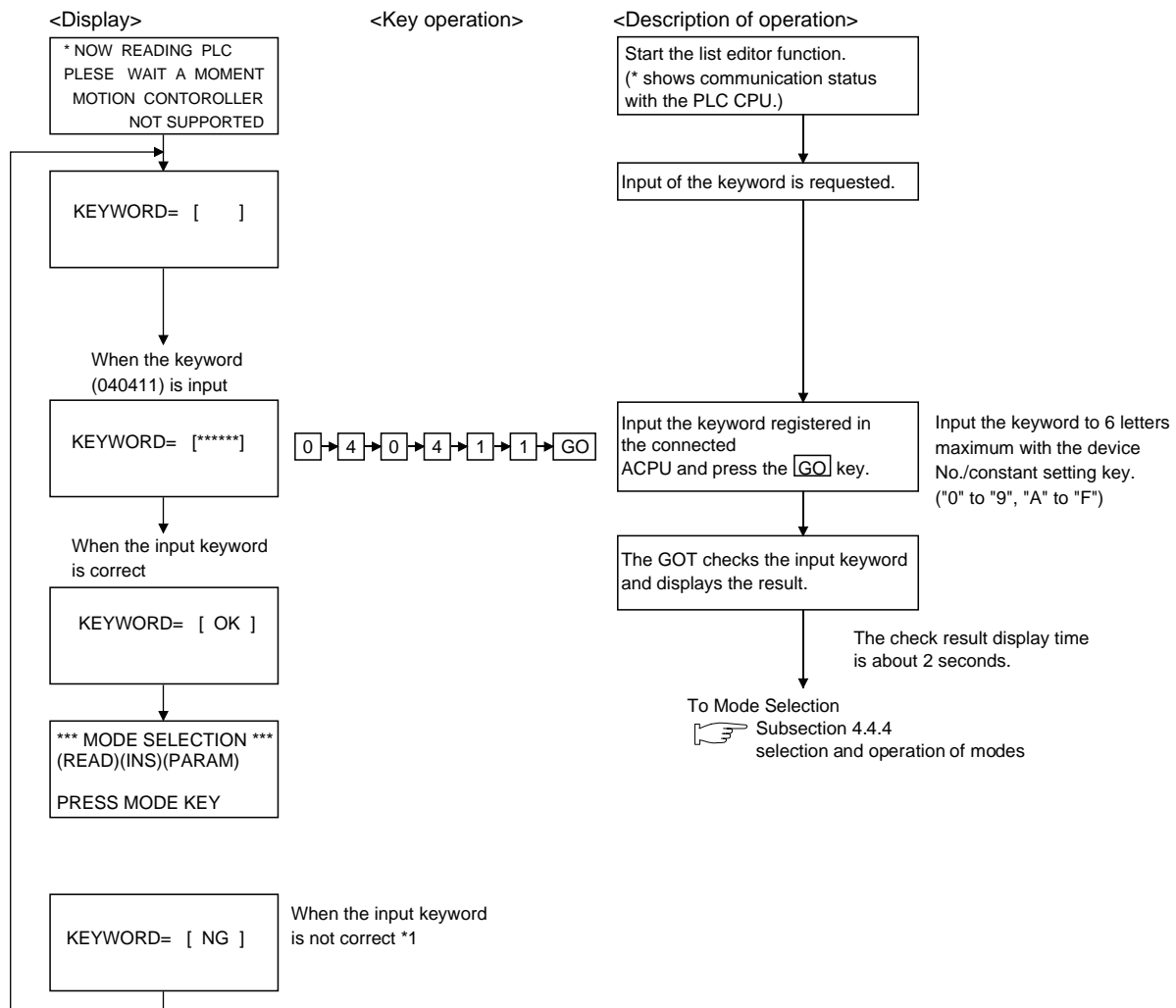
(3) If the project data has not been downloaded

The A list editor can be started from the utility even if the project data has not been downloaded to the GOT.

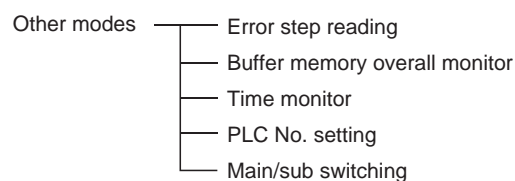
4.3.2 Operation of keyword input

If a keyword is registered in the ACPU when the connected ACPU or the ACPU PLC No. No. corresponding to the operation is changed, the GOT requests for input of the registered keyword. Input the keyword registered in the ACPU and press the **GO** key.
If a keyword is not registered in the ACPU, this operation is not required.

Procedure for inputting the keyword for the MELSEC-A list editor



*1 When the input keyword does not match with the registered keyword, only the following operations in subsection 4.6.7 can be allowed.





When you forgot the keyword entered in the ACPU

- Even if you are unsure of the keyword entered in the ACPU, you cannot delete it independently. If deleting user data, including sequence programs, does not cause any inconvenience to you, clear (delete) the entered keyword by <PLC memory all clear.>

Note that <PLC memory all clear> clears user data, including sequence programs, as well.

For further information about PLC memory all clear, see the following:



Section 4.5.6 PLC memory all clear

- When you know the keyword and want to change it or add a new keyword, see the following:

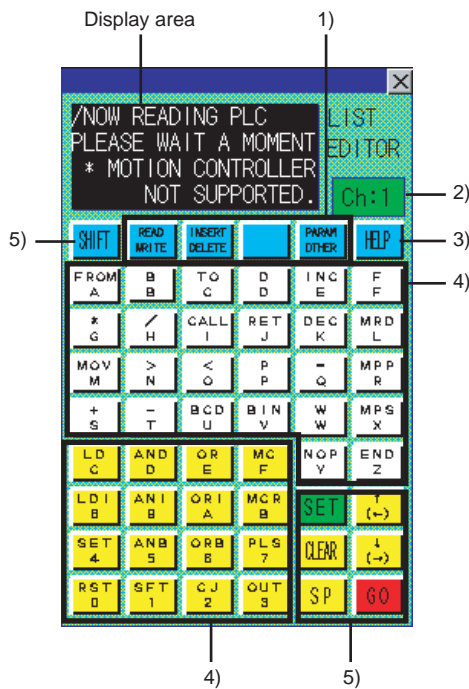


Section 4.6.1 Common operation

4.4 Operation Methods

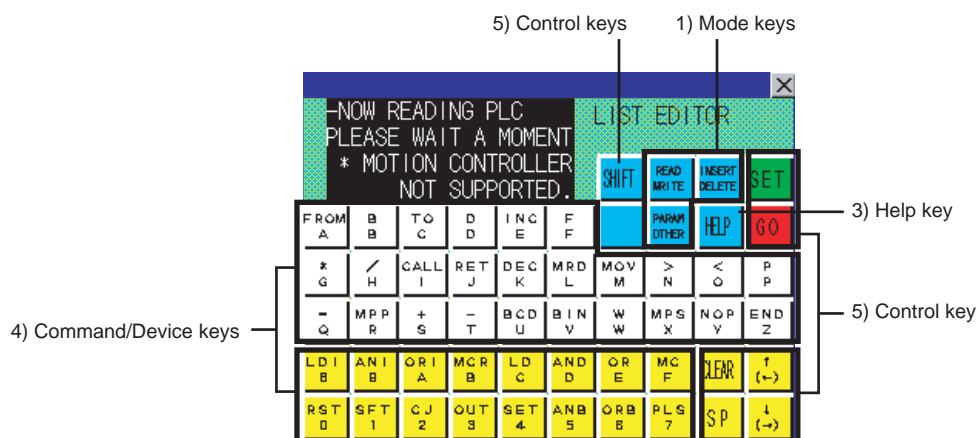
4.4.1 Key arrangement and a list of key functions

- (1) The arrangement and functions of the keys displayed on the MELSEC-A List Editor window are described below.
- (a) Key arrangement and functions for GT16 and GT15



Key name	Summary of function	Reference section
1) Mode key	READ WRITE The key that specifies read or write mode. Switch the valid key with [SHIFT] .	Section 4.4.4 Section 4.6.2 Section 4.6.3
	INSERT DELETE The key that specifies insert or delete mode. Switch the valid key with [SHIFT] .	Section 4.4.4 Section 4.6.4 Section 4.6.5
	PARAM OTHER The key that specifies parameter or other mode. Switch the upper and lower lines with [SHIFT] .	Section 4.4.4 Section 4.6.6 Section 4.6.7
2) Ch no.	Ch: Displays a Communication Ch No.	-
3) Help key	HELP The key that can operate the help function.	Section 4.5.5
4) Command/ Device key	FROM A Key that inputs K/H at the input of command, device name and constant input. Only when the valid key of upper/lower character needs to be switched, switching is allowed with input of the [SHIFT] and [SET] keys.	-
	END Z Key that inputs the command, device number and constant. Only when the valid key of upper/lower character needs to be switched, switching is allowed with input of the [SHIFT] and [SET] keys.	-
	RST 0 Key that inputs the command, device number and constant. Only when the valid key of upper/lower character needs to be switched, switching is allowed with input of the [SHIFT] and [SET] keys.	-
5) Control key	SET Key that declares start of step number input or automatic scroll. Switch key that makes the lower character valid on each key with dual functions. Whether upper or lower character is valid can be checked on the display.	Section 4.4.4
	SHIFT Switch key that makes the upper character valid on each key with dual functions. Whether upper or lower character is valid can be checked on the display.	Section 4.4.4
	CLEAR When the Help function is used, the screen returns to the display at the input of the [HELP] key. In the Parameter mode, the process is cancelled. After restarting, continue the operation. If the Clear key is pressed when the system is not in the Parameter mode, Other mode or Help function, the screen returns to the initial status of the mode selection. (The input commands or device numbers except for the mode are cleared.) This is used for repeating the procedure if incorrect keys are pressed. In the Other mode, the screen returns to the previous display.	- - Section 4.4.7 -
	SP Key that provides blank space at the command and at between device names.	-
	(←) (→) Key that moves the cursor on the display (►, ◼) or determines scroll directions.	Section 4.4.3
	GO Press this key at the last of a series of key operations to execute the operation. Check the details of key operations on the display before pressing this key.	Section 4.4.5

(b) Key arrangement and functions for the GT11



The functions of these keys are the same as those of the keys for the GT15. For a summary of the functions, see the preceding page.

(2) How to express keys and key operation descriptions

The keys for the MELSEC-A list editor and operation procedures are described in text in a simplified manner as shown below.

- (a) Some keys, such as **RST 0** and **MOV M**, are available for two different purposes. Operate such keys with either the upper or lower function indicated on them valid according to the operation. In descriptions, only the necessary functions are indicated on keys. (Example of description)

When entering the character "M," the **MOV M** key is indicated as **M** in the description.

Make upper or lower functions valid by using the **SHIFT** key or the **SET** key. For further information about the procedure for making upper or lower functions valid, see the following:

☞ Section 4.4.3 Switching valid keys (upper/lower functions)

- (b) The expression **Key 1** → **Key 2** → ... **Key n** means touching keys from **Key 1** to **Key n** in order.

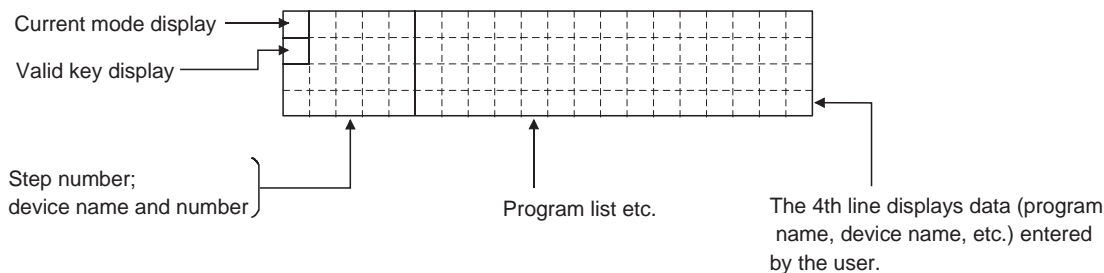
(Example of description)

The example of description shown below indicates that **SET** must be touched first, **F** second, **0** third, and **GO** finally.



4.4.2 Display format of the display area

The following describes the position and content of each data field in the MELSEC-A list editor display area

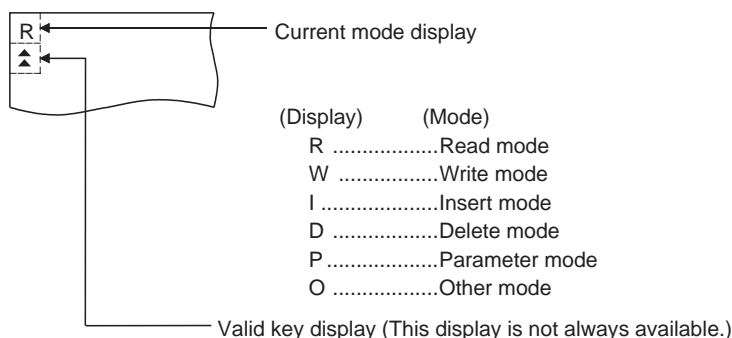


(1) Mode and valid key display

The following describes the mode and valid key display.

The mode display shows the MELSEC-A list editor mode selected by the user.

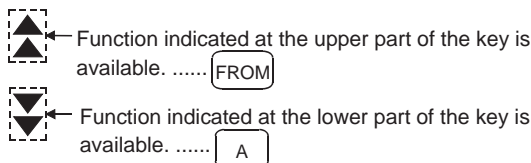
The valid key display shows which of the two functions assigned to each key is currently available: the function indicated at the upper part of the key or the function indicated at the lower part of the key.



With regard to keys framed in dotted lines in the figure shown at the left, the valid key display indicates which of the two functions assigned to each key is valid:

- ▲ : Function indicated at the upper part of each key is available.
- ▼ : Function indicated at the lower part of each key is available.

Example: FROM key



To switch between two functions of keys (functions indicated at upper and lower parts of the keys), press the **SHIFT** and **SET** keys.



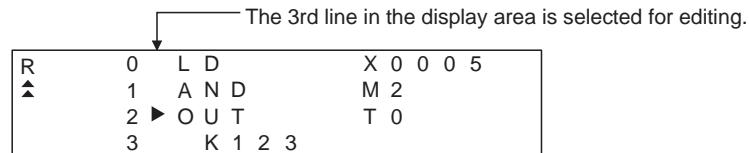
Section 4.4.3 Switching valid keys (upper/lower functions)

- (2) The cursor appears

The cursor appears ■ and is highlighted during data input.

- (3) Indication of the selected line

When a program list is displayed, the line currently selected for editing is indicated by " ► " appearing immediately after the step number.



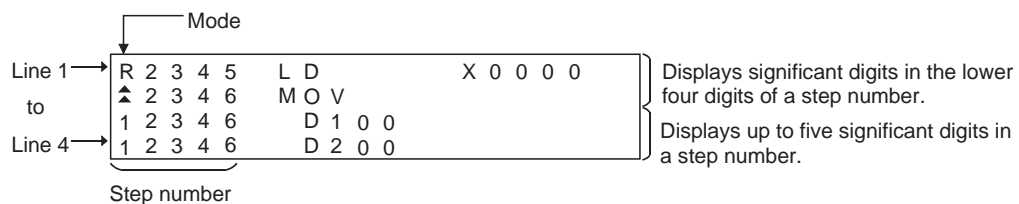
You can use the and keys to move " ► " up and down.

- (4) Step number display

A step number is displayed as a decimal number.

On the 1st and 2nd lines in the display area, significant digits in the lower four digits of a step number are displayed.

On the 3rd and 4th lines in the display area, up to five significant digits in a step number are displayed.



- (5) Device display

Two or more device specifications attached to a basic or application instruction are displayed using the same step number.

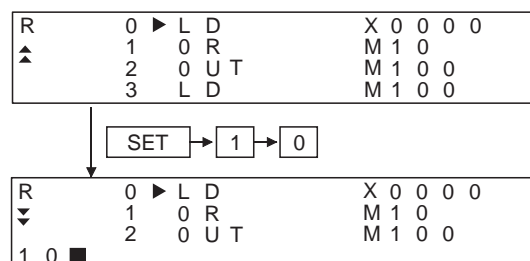
For information on the step numbers, see Paragraph (4) above.

- (6) Display of data input from the keys

Data input from the keys will appear at the cursor position. As more characters are input, the cursor moves to the right.

The cursor appears as " ■ ".

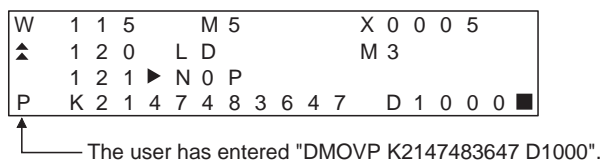
Example: The user enters → →



(7) Shifting of data to the left during the input of a program

When the user inputs a program, the codes entered before a touch on the **GO** key will appear on the 4th (bottom) line of the display area.

If the codes cannot appear on a single line, the display on the 4th line only will shift by a single character position to the left each time the user touches a key. (Each character that goes out of the display area by the left-shift operation is retained in the memory.)



You can move " ■ " in the specified direction (right or left) with the **←** or **→** key.

(8) Display of an error message

An error message will appear on the 4th line of the display area.

An error message on the display is cleared when you press any key. Then the display resumes the state before the appearance of the error message.

When an error message is displayed, take action according to the procedure described in the following section:

 Section 4.7 Error Messages and Corrective Actions

4.4.3 Switching valid keys (upper/lower functions)

Make valid the upper or lower function of keys available for two different purposes to operate the MELSEC-A list editor.

- (1) Switching the upper and lower functions of mode keys
In general, the upper functions of mode keys are valid.
To make the lower function of a mode key valid, touch the **SHIFT** key and then the mode key.
During switching of the upper and lower functions of mode keys, the mark on the valid keys remains ▲.
- (2) Switching the upper and lower functions of command/device keys
Switch the upper and lower functions of command/device keys using the keys shown below, if necessary.

SHIFT : Makes the upper function valid.

SET : Makes the lower function valid.

* The keys shown below can be operated even if the lower function of a key is valid.

(You do not need to operate the **SHIFT** key.)

• Comparison symbol keys at the input of comparison operation commands: **<**, **>**, **=**

• Minus key in command source data: **-**

For further information about the display of valid keys, see the following:



Section 4.4.2 Display format of the display area

- (3) Valid command/device keys after setting each mode
Valid command/device keys after setting each mode are shown below.
 - (a) Valid keys after setting read, write, and insert modes.
The upper functions of the command/device keys are valid.
If necessary, switch the upper and lower functions of necessary keys for operation.
 - (b) Valid keys after setting parameter, other, and help modes.
The lower functions of the command/device keys are valid.
If necessary, switch the upper and lower functions of necessary keys for operation.

4.4.4 Selection and operation of modes

Select appropriate modes of the MELSEC-A list editor for the operations described in Sections 4.5 and 4.6.

You can change modes as you desire during any of the operations described in Sections 4.5 and 4.6, so that you can continue operations while changing modes.

READ	.....	Read mode
WRITE	.....	Write mode
INSERT	.....	Insert mode
DELETE	.....	Delete mode
PARAM	.....	Parameter mode
OTHER	.....	Other mode

Remark

Mode key input is always valid.

Input of the mode key clears the input data except for the step numbers. The display returns to the initial status of the mode selection.

4.4.5 Command input procedures

Command input procedures can be classified as follows:

- 1) Input the command key to use the command on the key.
- 2) Input the alphanumeric keys corresponding to each character of command sequentially.
- 3) Select and input the command to be used from the Help function.

Command input procedures for 1) and 2) above are as follows.

For command input procedure 3) from the Help function, refer to Section 4.4.5 Command input procedures



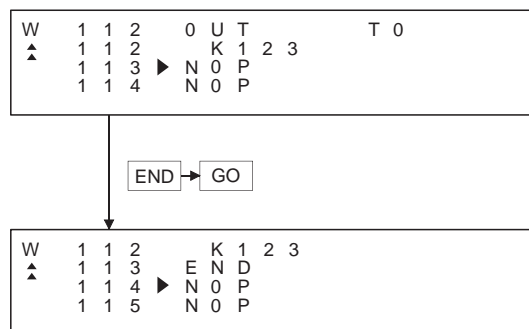
When the command is input, the input details are displayed at the 4th line (the bottom line) on the display. In the following description, the input of SP key may be omitted when a blank space between the input command and the cursor position is automatically inserted. Refer to the example in each description.

- (1) For command code only

- (a) When the command available on the keyboard is input

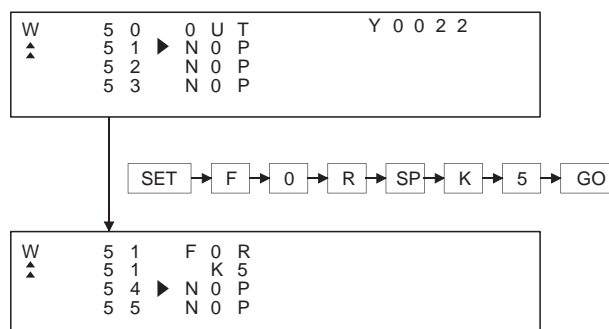
Command → GO

(Ex) When END is input



- (b) When the command not available on the keyboard is input

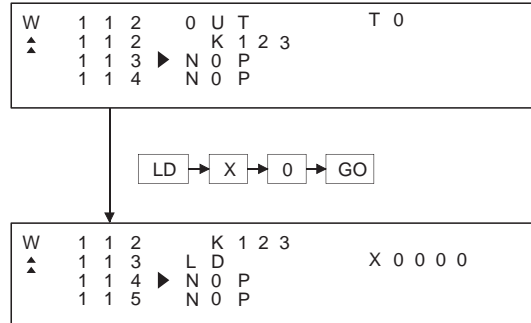
(Ex) When FOR K5 is input



- (2) For command code and device (1)

Command → SP → DEVICE → DEVICE No. → GO

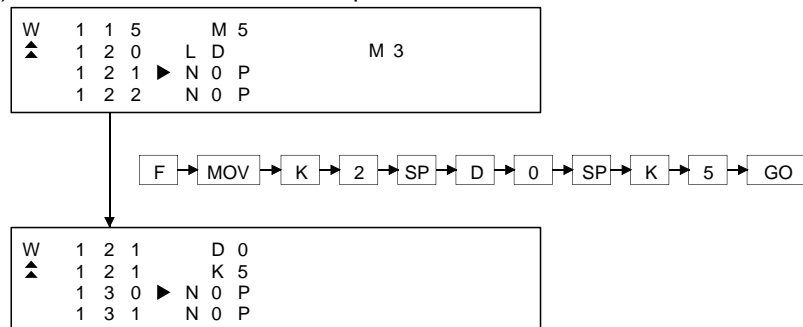
(Ex) When LD X0 is input



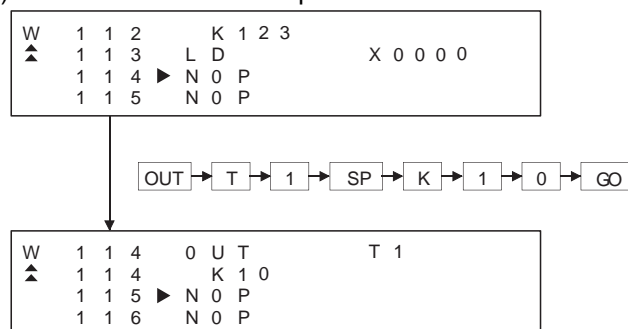
- (3) For commands other than above

Input the [SP] key between the command and the device, the source data, and the destination data.

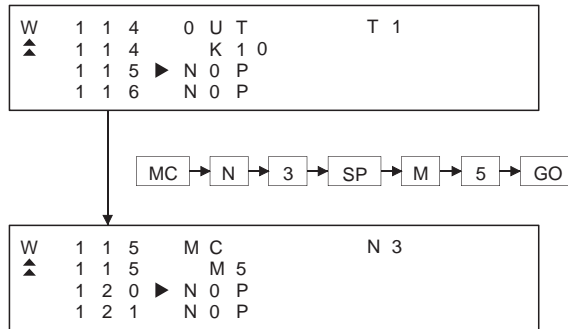
(Ex 1) When FMOV K2 D0 K5 is input



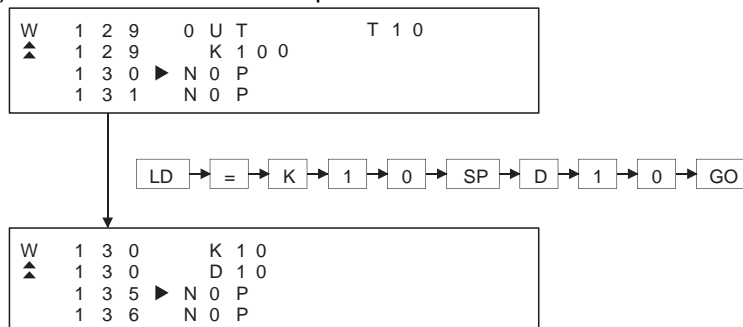
(Ex 2) When OUT T1 K10 is input



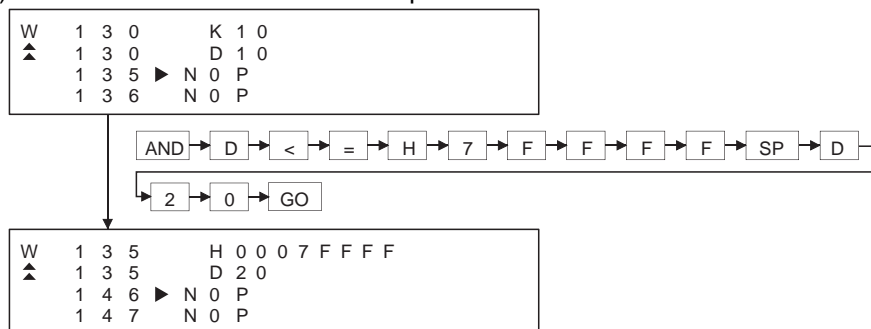
(Ex 3) When MC N3 M5 is input



(Ex 4) When LD = K10 D10 is input



(Ex 5) When ANDD<=H7FFFF D20 is input



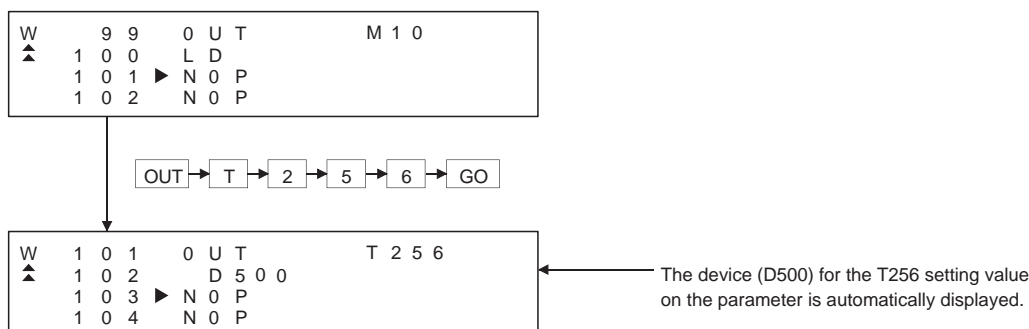
(4) Handling of devices M, L and S

Devices M, L and S in the Test, Monitor, Write and Insert modes change the display depending on the set parameters.

If LD L0 is input for the parameter setting of M0 to 999 and L1000 to L2047, the result is LD M0.

- (5) For extension timer/extension counter of AnA and AnUCPU
When the extension timer (T256 to T2047) and the extension counter (C256 to C1023) are input as the first device of the command, input the first device and the device number.

(Ex) When OUT T256 D500 is input



When the extension timer and the extension counter are used, be sure to set the 257 points or more and the setting value device (D, W, R) on the parameter for both the timer and the counter.

4.4.6 Hard copy output



Screens of the MELSEC-A list editor can be stored to a memory card in BMP/JPEG file format or printed with a printer.

Refer to the following for the hard copy.

- Starting the MELSEC-A list editor from the ladder monitor (☞ 3.4.2 Hard copy output)
- Setting the hard copy with GT Designer2.

☞ GT Designer2 Version □ Screen Design Manual (Section 13.2 Hard Copy))

4.4.7 Action if an incorrect key is input

If an incorrect key is input, cancel the input contents.

1 Operation

- Before touching the **GO** key (before reading/writing the input contents)
Before touching the **GO** key, touch the **CLEAR** key.
- After touching the **GO** key (after reading/writing the input contents)
Write the command again. (☞ 5.4.5 Writing commands)
Commands finalized by writing and inserting operations are revised (overwritten) with the program writing.



When the **CLEAR** key is input in the parameter mode, the GOT stops the process. To continue the operation, carry on the key input.

4.4.8 List of functions

The table below shows the functions available for each mode.

Mode (mode display)	Function
Write (W)	Writes, adds, or modifies a program.
	Changes a device used at the selected step in the program.
	Displays a list of instructions that start with the specified character and allows the user to choose from them.
	Reads a program after allowing the user to specify a step number.
	Declares the specified part of the program NOP.
	Displays a comment for the specified device.
Read (R)	Reads a program after allowing the user to specify a step number.
	Reads a program after allowing the user to specify an instruction used.
	Reads a program after allowing the user to specify a device used.
	Automatically scrolls the display of a program that has been read up to a specified step.
	Corresponds to program read and automatic scroll functions described above.
	Displays a comment for the specified device.
Insert (I)	Inserts a new program into the displayed program.
	Displays a list of instructions that start with the specified character and allows the user to choose from them.
	Reads a program after allowing the user to specify a step number.
	Moves the selected part of the program to a specified part of the program.
	Copies the selected part of the program to a specified part of the program.
	Displays a comment for the specified device.
Delete (D)	Deletes a program at the specified step.
	Deletes the specified block in the program.
	Deletes all NOP instructions found in program codes described before the END instruction. (NOPLF instructions will not be deleted.)
	Displays a comment for the specified device.
Parameter (P))	Clears all parameters in the ACPU only.
	Sets or changes various parameters like those for the memory capacity, timer/counter, and latching range.
	Sets or changes a keyword.
Others (O)	Changes values set to timer/counter devices.
	Displays details of an error in the ACPU and the associated step number.
	Checks duplex coils, instruction codes, and other elements in the program.
	With regard to a special function unit of the specified I/O number, monitors the contents of the buffer memory at the specified address.
	Monitors the ACPU clock (D9025 through D9027).
	Clears all contents of the ACPU memory and resets it to the initial state.
	Clears the program (Main/Sub) currently selected.
	Clears all device memories except for special-D, special-M, and R.
	Switches the target ACPU in GOT operations in each mode.
	Switches the target program (Main/Sub) in GOT operations in each mode.
	Forcibly changes the ACPU running status between RUN and STOP.
	Performs a read or write operation to the ACPU memory in the machine language.

4.5 Basic Operation

This section takes an easy operation example to describe the basic operation of the MELSEC-A list editor.

4.5.1 Reading sequence programs

[Operation exaple]

<Key operation>

1

Select the "Read" mode.

READ

2

Read the 0th step.

SET → 0 → GO

3

GO

<Display>

R 7 D20

▲ 14 END

15▶NOP

16 NOP

R 0▶LD X0000

▲ 1 OR Y0010

2 ANI X0001

3 OUT Y0010

R 3 OUT Y0010

▲ 4▶OUT T0

4 K10

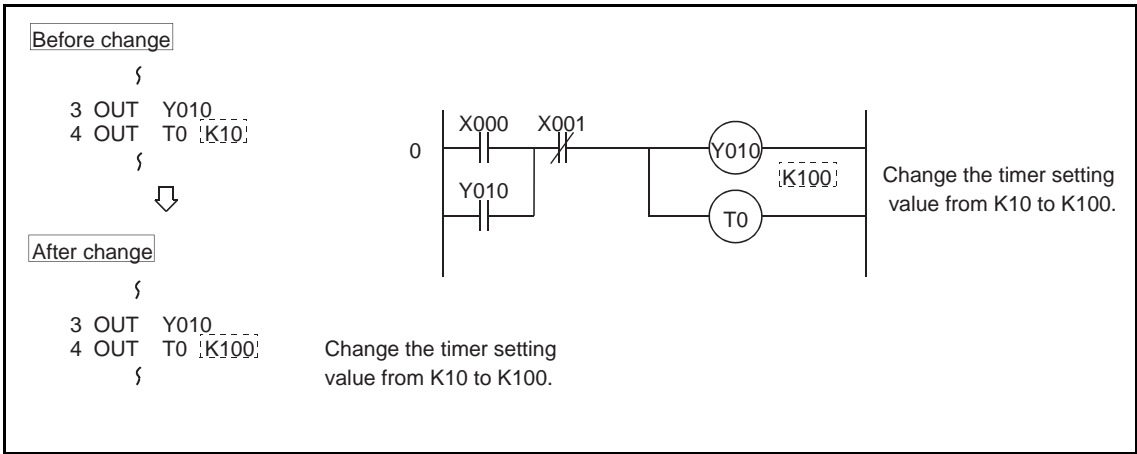
5 LD T0

↓

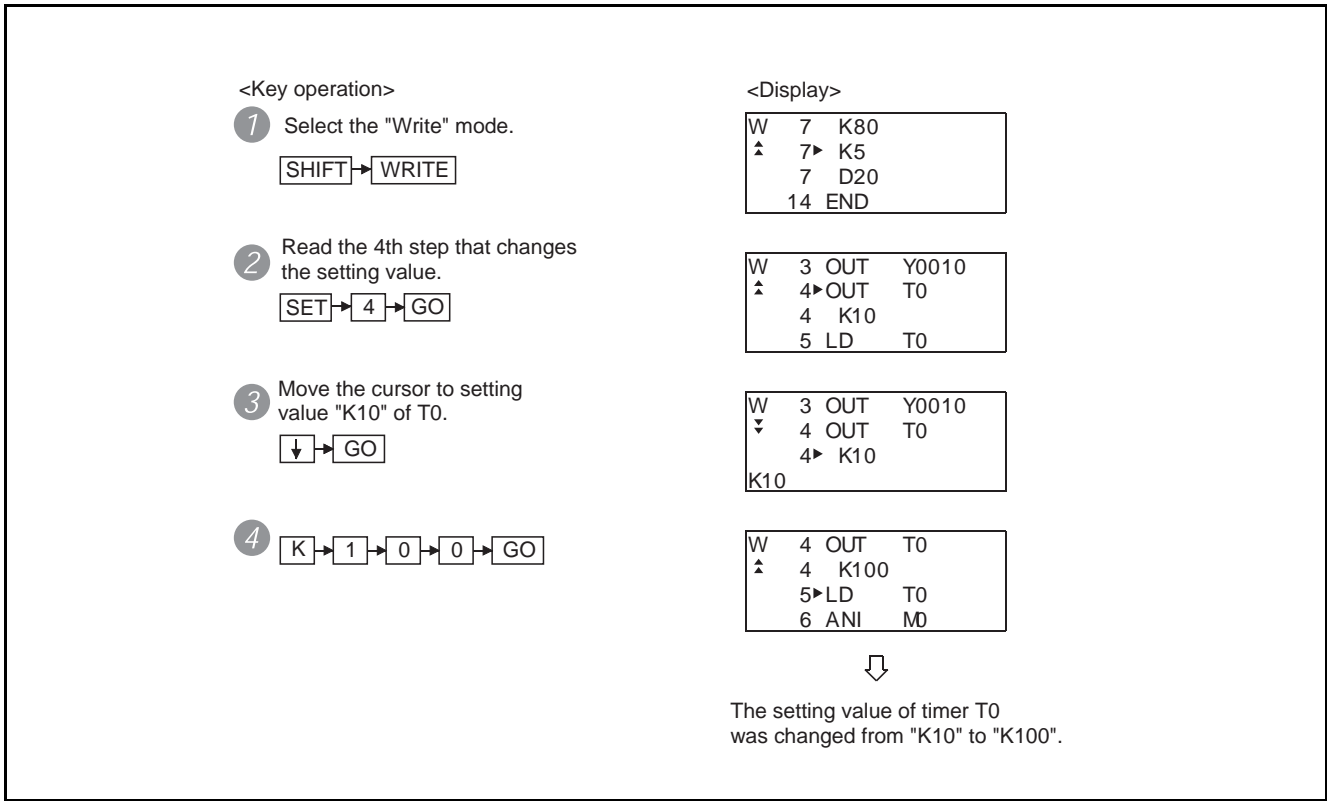
Scroll the screen with the GO key.

4.5.2 Changing (Overwriting) commands

The example shown below is used to describe how to change sequence program commands.

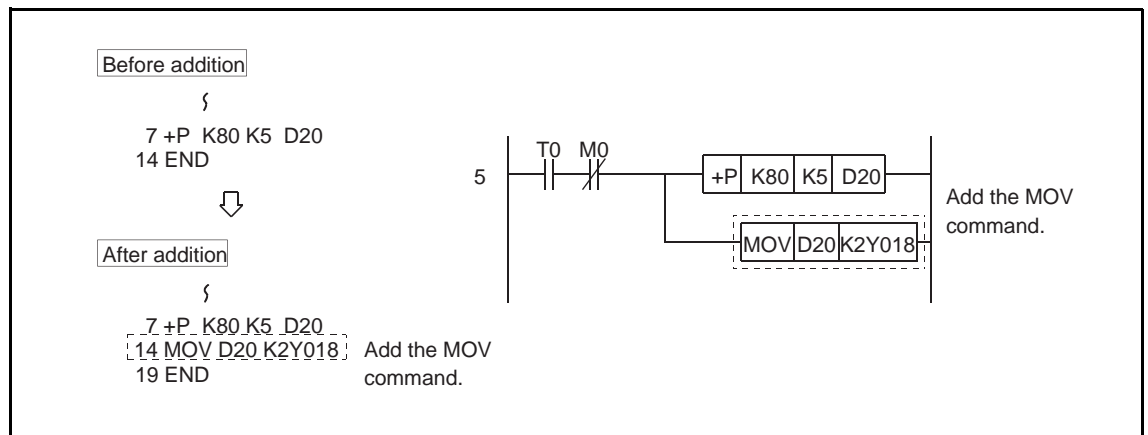


[Operation example]

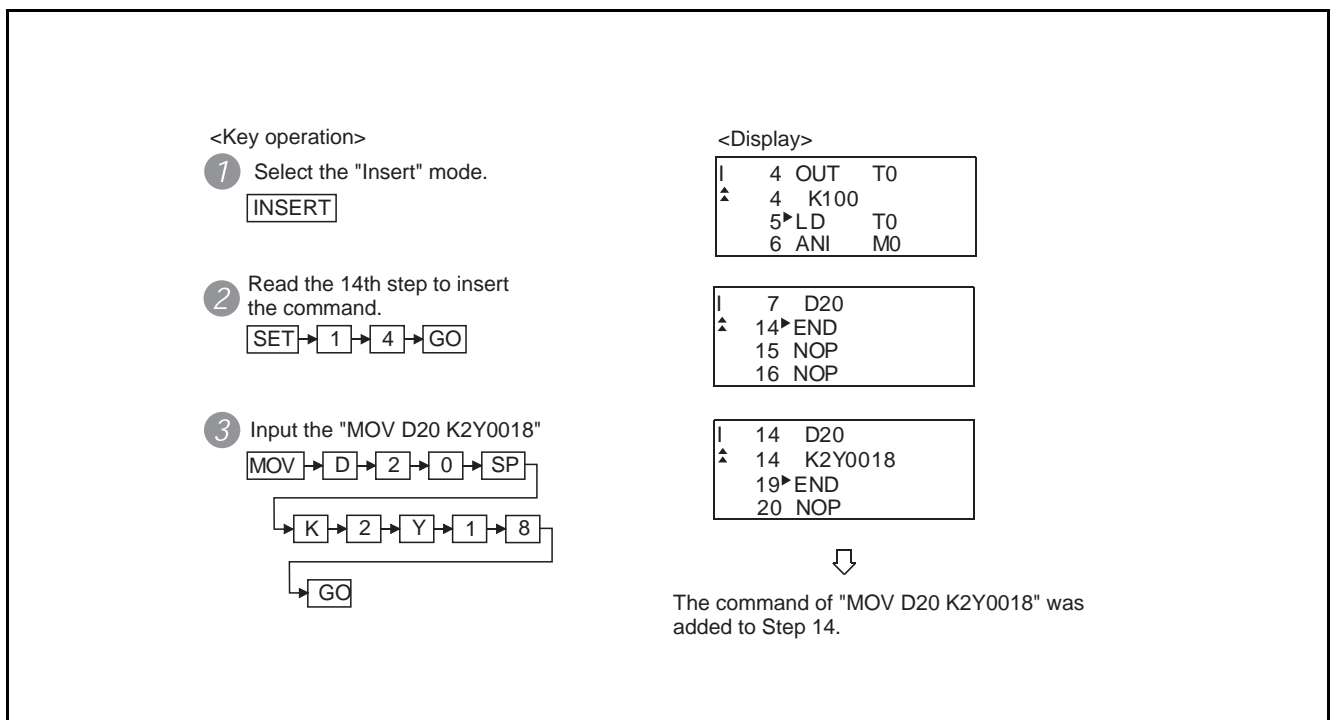


4.5.3 Adding (Inserting) commands

The example shown below is used to describe how to add sequence program commands.

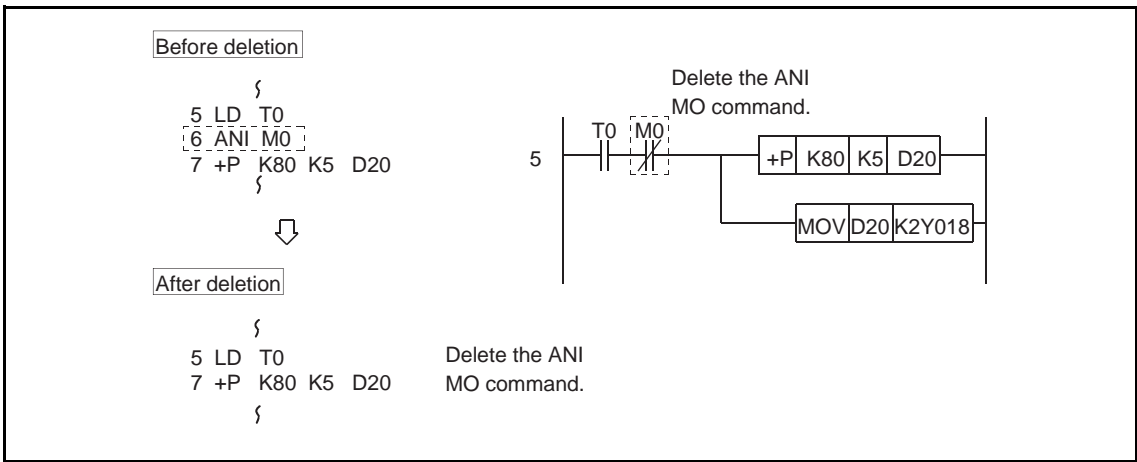


[Operation example]



4.5.4 Deleting commands

The example shown below is used to describe how to delete sequence program commands.



4.5.5 Using the help function

HELP is input to use the Help function.

Input of **HELP** displays the Help function menus in each mode. Select the corresponding item for execution.

- (1) Reading the command in the sequence program

Example of reading the area using the "MOV" command in the sequence program.

[Operation example]

<Key operation>

- 1 Input the **HELP** key in the Read mode.

READ → **HELP**

- 2 1: Select "Read".

1

- 3 2: Select "INSTRUCTION".

2

- 4 Set the "MOV" command.

MOV

- 5 **GO**

- 6 **GO**

<Display>

```
***HELP MENU***  
1: READ  
2: COMMENT DISPLAY  
CLEAR:END
```

```
*** READ *** 1/2  
1: STEP  
2: INSTRUCTION  
CLEAR:END HELP:MENU
```

```
*** READ ***  
KEY IN INSTRUCTION  
[ ]  
CLEAR:END HELP:MENU
```

```
*** READ ***  
KEY IN STEP NO.  
[MOV ]  
CLEAR:END HELP:MENU
```

```
R 6 D20  
▲ 13►MOV  
13 D20  
13 K2Y0018
```

Reading "MOV D20 K2Y0018"
of the 13th step.

```
R 6 D20  
▲ 13►MOV  
13 D20  
NOT FOUND
```

Message when the "MOV"
command is not present after
the 13th step.



Now, reading the command with the Help function
command specification is completed.

(2) Displaying comment

The following example shows the procedure of displaying the comment in the Read mode.

[Operation example]

<Key operation>

- 1 Input the **HELP** key in the Read mode.

HELP

- 2 Select "2: COMMENT DISPLAY".

2

- 3 Select "1: YES".

1

- 4 Move the cursor to the following step.

↓

<Display>

```
***HELP MENU***  
1: READ  
2: COMMENT DISPLAY  
CLEAR:END
```

```
***COMMENT DISP.***  
1: YES  
2: NO  
CLEAR:END HELP:MENU
```

```
R  0 LD  X0000  
↑  
1 OUT  Y0020  
2 LD   X0000  
Motor start limit
```

Display the comment of
the device at the cursor position.

```
R  0 LD  X0000  
↑  
1 OUT  Y0020  
2 LD   X0000  
Motor start check
```

4.5.6 PLC memory all clear

When input of a keyword is requested, all parameters and sequence programs can be cleared together with the keyword registered in the ACPU using the operation below.

[Operation example]

- 1 Display the keyword input request.

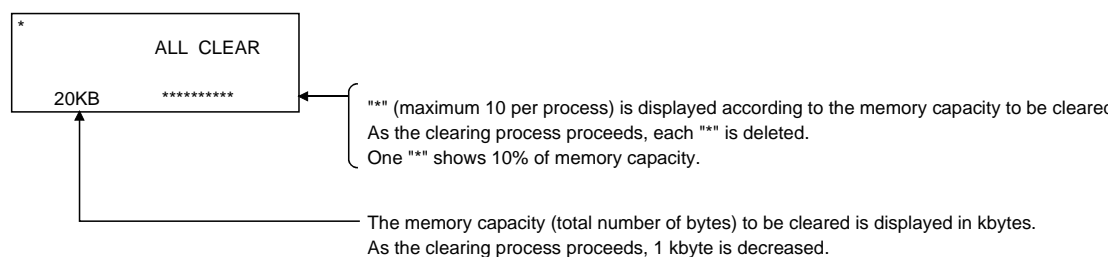
KEYWORD= []

- 2 Stop operation of ACPU
Set the target ACPU to the stop status.

- 3 Operation of PC memory all clear
Input "ALLCLR" and press the **GO** key.



- 4 Display of PC memory all clear process
When the GOT starts clearing the process, the display in the left appears. "*" column and the total number of bytes change sequentially.



- 5 Completion of PC memory all clear process
When the GOT completes the clearing process, the screen in the left appears.
(status before the mode selection)

** MODE SELECTION ** (READ) (INS) (PARAM) PRESS MODE KEY
--

- 6 If necessary, start the next operation.

4.6 List of Operation Procedures

4.6.1 Common operation

Details		Purpose	Procedures (key input sequence)
Basic operation	Input of keyword at start-up	Input when the keyword is registered in the ACPU.	Keyword → GO
	Mode selection Switching of valid key	Select the mode.	Mode key (READ , INSERT , PARAM) SHIFT → Mode key (WRITE , DELETE , OTHERS)
	Switching of valid key	Switch the valid key (function indicated at the upper/lower part of the key) by a user.	SHIFT or SET
	Action for incorrect input	Perform the operation for incorrect key input.	CLEAR , Mode key or SHIFT → Mode key
	Operation of command help function	Perform operation with the Help function command specification.	Perform program display → HELP → 1 → 1 → 1 → Input the capital letter of the command. <div style="display: flex; align-items: center; margin-left: 40px;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">GO</div> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">1</div> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">1</div> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">1</div> <div style="margin: 0 5px;">→</div> <div style="margin: 0 5px;">Input the capital letter of the command.</div> <div style="margin: 0 5px;">→</div> <div style="margin: 0 5px;">Input the corresponding command number.</div> <div style="margin: 0 5px;">→</div> <div style="border: 1px solid black; padding: 2px;">GO</div> </div>
	Display of Comment	Display the comment stored in the ACPU.	Perform program display operation → HELP → 2 → 1 <div style="display: flex; align-items: center; margin-left: 100px;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">1</div> <div style="margin: 0 5px;">→</div> <div style="border: 1px solid black; padding: 2px;">2</div> </div> in the Write/Read/Insert/Delete mode.
Command input operation	Command code only	Input the command code only.	Command → GO
	Command code and 1 device	Input the command code and 1 device.	Command → SP → Device → Device No. → GO
	Other than above (command key input)	Input the command other than above with the command key.	Input the SP between the device, the source data and the destination.
	Other than above (device key input)	Input the command other than above without the command key.	Input the SP between the command, the device, the source data and the destination.

4.6.2 Operation in write mode (W)

Details	Purpose	Procedures (key input sequence)
Continuous write in NOP	Set the specified range in the program to NOP.	Program display → HELP → 1 → 2 → 1 → Start step specification → GO → Final step specification → GO → 2 → Start step specification → GO
Write/modify (change) of program	Write the new program/modify (change)	SHIFT → WRITE → SET → Step number → GO → Com → GO ↑ ↓

4.6.3 Operation in read mode (R)

Details	Purpose	Procedures (key input sequence)
Command reading with the specified step number	Read the command of the specified step number in the program.	READ → SET → Step number → GO → GO
Read the command with the specified command.	Read the specified command in the program.	READ → Command → Device → Device number → GO → GO
Read the command with the specified device.	Read the command with the specified device used in the program.	READ → SET → Device → Device number → GO → GO
Automatic scroll	Display the program with automatic scroll.	Read operation above → SET → ↑ ↓ → SET → Step number → SET → SP → ↑ ↓

4.6.4 Operation in insert mode (I)

Details	Purpose	Procedures (key input sequence)
Insert a command in the program.	Insert a command in the program.	<pre> graph LR INSERT[INSERT] --> SET[SET] SET --> Step[Step number] Step --> GO1[GO] GO1 --> Com[Com] Com --> GO2[GO] subgraph SelectionBox [] SET Step GO1 Up[↑] Down[↓] end </pre>
Move the program.	Move the whole program.	Display the program → [HELP] → [1] → [2] → Specify the movement start step. → [GO] → Specify the movement end step. → [GO] → Specify the movement destination step. → [GO]
Copy the program.	Copy the program.	Display the program → [HELP] → [1] → [3] → Specify the copy start step. → [GO] → Specify the copy end step. → [GO] → Specify the copy destination step. → [GO]

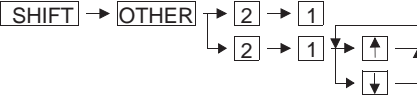
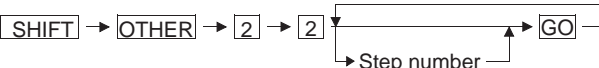
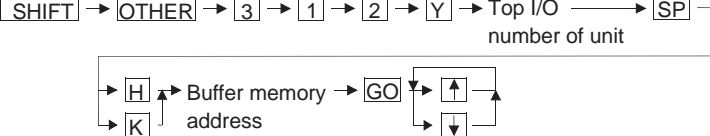


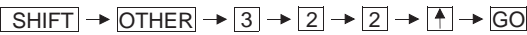
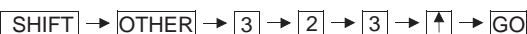
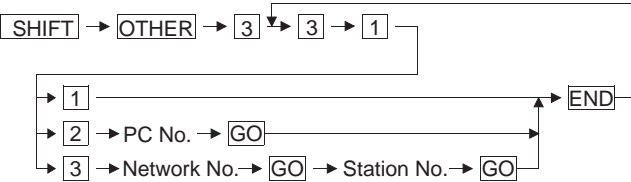
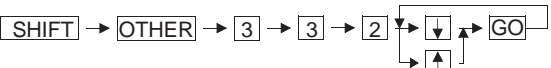
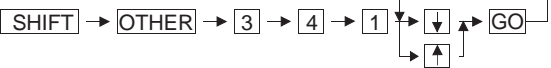
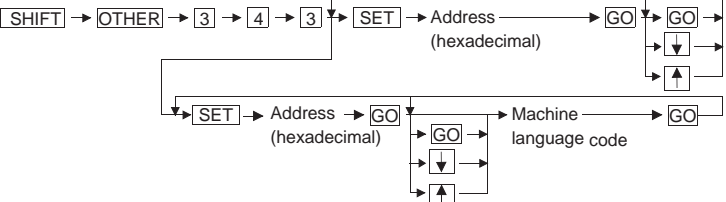
4.6.5 Operation in delete mode (D)

Details	Purpose	Procedures (key input sequence)
Delete a command from the program.	Delete a command from the program.	<pre> graph LR SHIFT[SHIFT] --> DELETE[DELETE] DELETE --> SET[SET] SET --> Step[Step number] Step --> GO1[GO] GO1 --> GO2[GO] subgraph SelectionBox [] SET Step GO1 Up[↑] Down[↓] end </pre>
Delete the specified range of the program.	Specify the range of the program for deletion.	Display the program → [HELP] → [1] → [1] → Specify the deletion start step. → [GO] → Specify the deletion end step. → [GO]
Delete the whole NOP.	Delete the whole NOP in the program.	Display the program → [HELP] → [1] → [2]

4.6.6 Operation in parameter mode (P)

Details	Purpose	Procedures (key input sequence)
Clearing all parameters	Return the parameters to the initial setting status.	
Parameter setting (for A0J2HCPU)	Set the parameters for the A0J2HCPU.	
Setting of latch range	Select the latch range from "No latch", "1/2 latch" and "All latch".	1) → → 2)
Setting of step relay	Set the availability (S1536 to 2047) of the step relay.	1) → → 2)
Completion of setting	When the parameter setting is complete, write the PLC CPU.	2) → (End of writing is displayed.)
Parameter setting (other than A0J2HCPU)	Set the parameters other than A0J2HCPU.	
Setting of memory capacity	Set the main sequence program capacity and the file register capacity.	1) → (For main, input unit: 1K step) 1) → (For sub, input unit: 1K step) 1) → (For file register, input unit: 1K point)
M, L, S setting (other than AnA, AnUCPU)	Set the top device number used in the latch relay/step relay.	1) →
M, L, S setting (AnA, AnUCPU only)	Set the top device number used in the latch relay/step relay/internal relay.	1) →
Timer setting (other than AnACPU)	Set the top device used in the low speed/high speed/retentive timers.	1) →
Timer setting (AnACPU)	Set the number of timers used, the top device number that stores the setting value after T256, and the top device used in the low speed/highspeed/retentive timers.	1) →
Counter setting (AnACPU only)	Set the number of counters used, and the top device number that stores the setting value after C255.	1) →
Setting of latch range WDT setting	Set the range of the device for latch setting.	1) →
WDT setting (other than AnA, AnU)	Set the value of the watchdog timer in the unit of 10 ms.	1) → (input unit: 10 ms)
Setting of I/O control system (only for A3HCPU and A3MCP)	Set the I/O control system.	1) →
Completion of setting (write)	When parameter setting is complete, write the PLC CPU.	2) → (End of writing is displayed.)

4.6.7 Operation in other mode (O)

Details	Purpose	Procedures (key input sequence)
Error check	Operation that checks the error step number/error code for the current error in the ACPU. (other than AnA and AnUCPU)	 <p>(Except AnA, AnUCPU) (AnA, AnUCPU)</p>
Program check	Check the program(double coil, command code, END command).	
Buffer memory batch monitoring	Monitor the buffer memory details of the special function unit.	
Clock monitor	Monitor the clock data of the ACPU.	
Clearing of all PC memories	Clear all memories in the ACPU.	
Clearing of all programs	Clear all sequence program, microcomputer program and T/C setting value areas.	
Clearing of all device memories	Clear all details of the bit device and the word device in the ACPU.	
PLC No. setting	Set the PLC No. of other stations for access on the MELSECNET II (B) or MELSECNET/10.	
Main/sub-program switching	Select the main/sub- program displayed on the list edit screen.	
Remote run/stop	Operate the run/stop status of the ACPU from the GOT.	
Read/write of machine language	Specify the memory address (absolute address) of the ACPU. Read the memory details and write the machine language to the memory.	

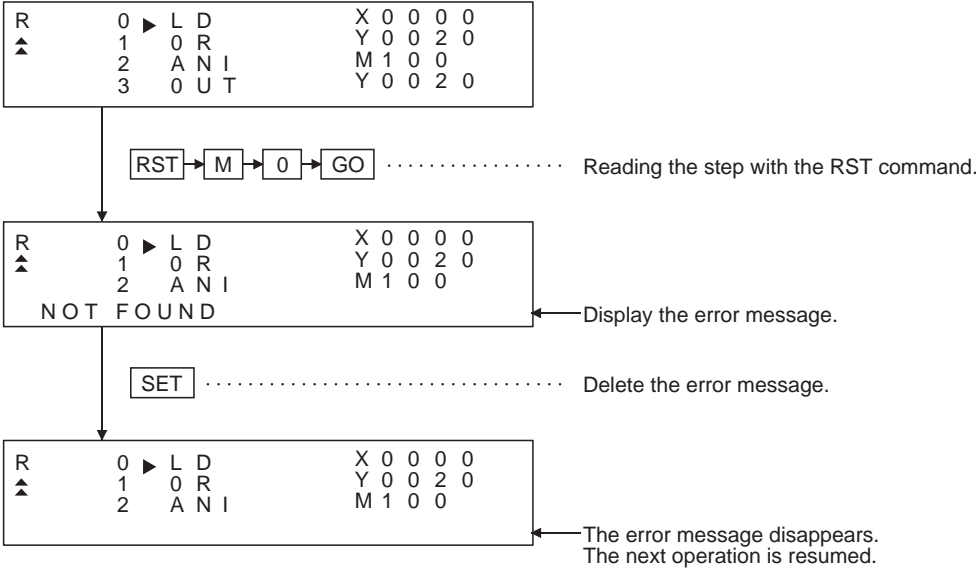
4.7 Error Messages and Corrective Actions

4.7.1 Error messages and corrective actions in direct CPU connection

If an error is detected with the MELSEC-A list editor during operation of each mode, an error message appears at the 4th line of the display.
Error messages, display conditions and corrective actions are displayed below. If an error message appears, take the following actions to resume operation.

- 1 Check the error message.
- 2 Remove the cause of the error.
- 3 Input the corresponding key.
(The error message disappears. The screen returns to the status before error.)

(Example)



Error message	Description	Corrective action
Address error	In machine language writing, the address which was tried to be written was at the write-protect area.	Set the correct address.
No corresponding program	The specified command was not found.	Check the program.
Memory cassette check	In communication with the CPU for clearing the keyword or writing the parameter, the memory cassette is insufficient or not mounted.	(1) Mount the memory cassette properly. (2) Replace the memory cassette with a new one.
Step over error	The set step number is larger than the maximum step number.	Set the correct step number.
Setting error	Setting value is not correct.	Set the correct value.
Not selectable	The function which cannot be executed was selected.	Select other function.
Operation error	The set device symbol is incorrect.	Perform the correct key operation.
Device error	The specified command was not found. The device number exceeds the range.	(1) Set the correct device symbol. (2) Set the number within the range of CPU device.
Identical coil	The identical coil is found in the sequence program.	Proceed to the next operation if it does not affect the control. Correct the program if it affects the control.
Command error	When the program is read, it cannot be converted to the proper command.	When the CPU has detected the error, stop running of the operation. After resetting the CPU, check the command around the error. Write the correct command. (For check of the error step, refer to 4.6.7.)
Command setting error	The command set at the time of read, write or insert is not correct.	Set the correct command.
Memory protect	When writing in the Write or the Insert/Delete mode, the memory protect switch in the memory cassette is ON.	Turn OFF the memory protect switch in the memory cassette.
Capacity over	Memory assignment set in the parameter exceeded the capacity of the memory cassette.	Set the parameter within the capacity of the memory cassette.
No END command	There is no END command.	Write the END command at the last step of the program.
PLC communication error	When the list editor function is started, proper communication with the PLC is not made.	Restart the list editor function. If communication is not made properly, check the following: (1) GOT main unit (2) Connection of the cable (3) CPU main unit (if any error has occurred)
PLC COMM ERROR PLEASE CLOSE	When the editor for MELSEC-A is started, proper communication with the CPU is not made.	Close and restart the editor for MELSEC-A. If communication is not made properly, check the following: (1) GOT main unit (2) Connection of the cable (3) CPU main unit
PC write error	Correct writing was not made in the Write or Insert mode.	(1) Check the setting of RAM/ROM. (2) Check the RAM mounting. (3) Check the setting of the memory protect switch in the CPU.
PLC is running	Writing, insertion or deletion was attempted during running of the CPU.	Stop the CPU.
PC No. error	The PLC number is set to other station.	Change the PLC number and set the station for access to the host.

(Continued to next page)

Error message	Description	Corrective action
**KS over	The value exceeding the range of the program capacity by **K steps was attempted to be set.	Reduce the program capacity by **K steps for setting.
**KP over	The value exceeding the range of the file register capacity by **K points was attempted to be set.	The value exceeding the range of the file register capacity by **K points was attempted to be set.
Not available for QnACPU. Set the PLC No.	The CPU at the list edit destination is QnACPU.	Set the PLC number and change the station for access.
The keyword is not input. Set the PLC No.	The "GO" key was pressed without input of the keyword on the keyword input screen.	Set the PLC number and change the station for list edit. Or select the same station and input the keyword.
The PLC parameter was changed. Read the ladder monitor again.	The PLC parameter exceeding the file (R) register capacity was set.	Restart the GOT system if required.
The PLC parameter was changed. Restart the GOT system.	The capacity of the file (R) register was set.	Read the ladder monitor on the PLC again if required.
The PLC program was edited. Read the ladder monitor again.	Edit the PLC program.	Read the ladder monitor on the PLC again if required.

1

OVERVIEW

2

SYSTEM MONITOR

3

LADDER MONITOR
FUNCTION

4

MELSEC-A LIST EDITOR

5

MELSEC-FX LIST
EDITOR

6

INTELLIGENT MODULE
MONITOR

7

NETWORK MONITOR

8

Q MOTION MONITOR

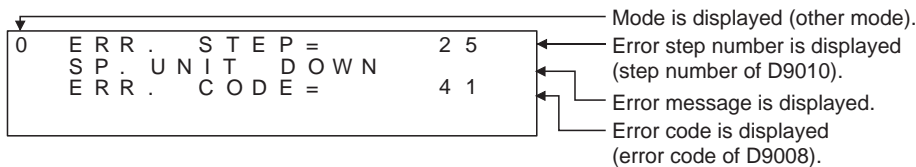
4.7.2 PLC CPU error messages and troubleshooting

When the error step read in other mode is performed, the error message and the error step of the current error in the ACPU are displayed.
Error messages, error details and corrective actions are displayed below. If an error message appears, take the following actions to resume operation.

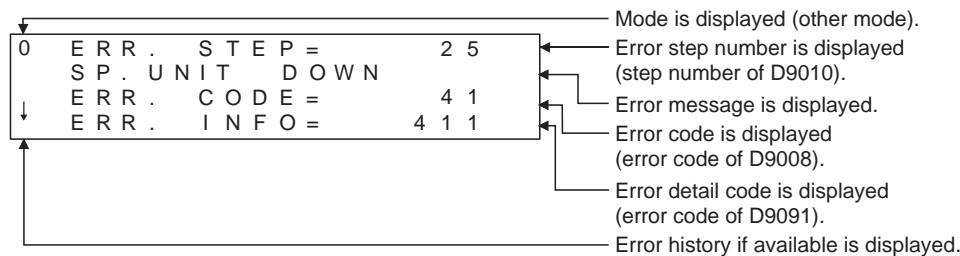
- 1 Check the error message.
- 2 If the error code is not displayed, check the error code of special register D9008 with the system monitor function (Refer to Chapter 2.).
- 3 Remove the cause of the error.

(Display)

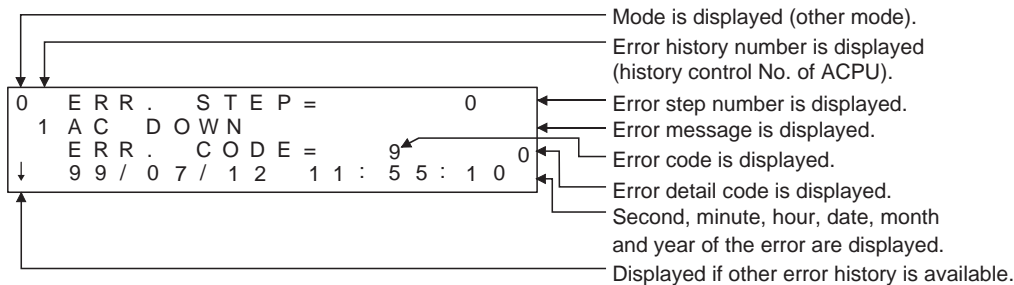
(1) Example of display for an error in the CPU other than AnA and AnU



(2) Example of display for an error in the AnA or AnUCPU



(3) Example of next display for the display of "↓" above (error history is available)



When an error message of the PLC CPU appears, refer to the ACPU programming manual (Common Command) and the user's manual for each CPU for corrective actions.

4.7.3 Error using list editor function on the link system

When the MELSEC-A list editor is used on the link system, the "PLC communication error (**)" may appear. In this case, check the error details and the corrective actions.

Error No.	Error message	Corrective action
2	Time-out error: No response to the request	Check the cable wiring.
4	Process cancel: New process request was given to the list editor function while the CPU is processing.	Perform correct key operations on the GOT.
5	Sum check error: A sum check error from the link communication has occurred.	There may be noise interference. Check the system again.
16	PLC No. error: There is no station corresponding to the PLC number.	Check the PLC number setting. Set the correct number.
19	This error may occur when the ACPU is reset during monitoring.	Perform the monitor setting again.
24	Remote error: Although remote stop/pause is performed from the computer link unit, remote run/stop is additionally performed.	Perform the remote run/stop/pause from either unit.
25	Refer to the next page for error messages and actions. After confirming the device value explained at the next page with the system monitor function, take action.	
32	Link error: While the slave station is monitoring the master station, the master station is reset.	Perform the monitor setting again.
34	EEPROM failure: The EEPROM, cannot be written due to EEPROM failure.	Replace the EEPROM with a new one.

[Detailed description of error No. "25"]

If error number "25" appears, the following causes are possible. Check the details and the corrective actions.

(1) When connected to the master station

Device number	Description	Details	
M9210	Link card error (for master station)	OFF : Normal ON : Error	The control depends on whether there is an error at the hardware of the link card. The link card in the CPU link unit is judged at the CPU. Replace the link unit.
M9224	Link status	OFF : Online ON : Offline, station-to-station test, or self-loopback test	The control depends on whether the master station itself is online or offline, or in the station-to-station mode or the self-loopback mode. Check the mode switch.
M9227	Loop test status	OFF : Not executed ON : Forward loop test and reverse loop test are being executed.	The control depends on whether the master station itself is executing the forward loop test or the reverse loop test.

(2) When connected to the local station

Device number	Description	Details	
M9211	Link card error (for local station)	OFF : Normal ON : Error	The control depends on whether there is an error at the hardware of the link card. The link card in the CPU link unit is judged at the CPU. Replace the link unit.
M9240	Link status	OFF : Online ON : Offline, station-to-station test, or self-loopback test	The control depends on whether the local station itself is online or offline, or in the station-to-station mode or the self-loopback mode. Check the mode switch.
M9257	Loop test status	OFF : Not executed ON : Forward loop test and reverse loop test are being executed.	The control depends on whether the local station itself is executing the forward loop test or the reverse loop test.

(3) When connected to the CPU in MELSECNET/10

An error in the MELSECNET/10 is reported using a four digit (hexadecimal) error number. For details of the errors and corrective actions, see the MELSECNET/10 Network System Reference Manual.

If an error code not listed in the previous page is displayed, contact the nearest of our system service centers, agents, and branch offices.

5. MELSEC-FX LIST EDITOR



5.1 Features

The MELSEC-FX list editor enables you to change the sequence program in the FX PLC. This function is intended to troubleshoot the PLC system and to streamline maintenance operations. By installing list editor for MELSEC-A, an Option OS, from GT Designer2 into the GOT, you can edit the FX PLC program.

The features of the MELSEC-FX list editor are described below.

1 Parameters and sequence programs are easy to maintain.

You can check or partly correct, change or add FX PLC CPU parameters and sequence programs simply by operating keys.

You can easily edit sequence programs without preparing any peripheral unit other than the GOT.

(Example of changing sequence program commands)

Changed

LD	X000	→	LD	X000
OUT	Y020		OUT	Y030
LD	X001		LD	X001

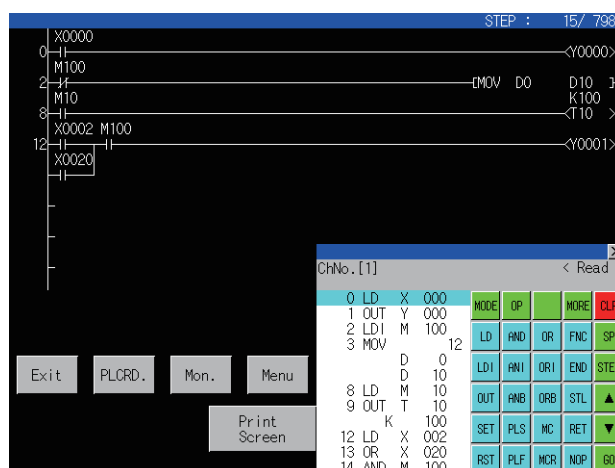
2 Combination with the ladder monitor



You can open the MELSEC-FX List Editor window from the Ladder Monitor screen with a single touch.

You can edit PLC program while checking the ladder.

You can also display a list from the step line displayed by the ladder monitor.



3 Errors that occur during list editing can be checked easily.

Error messages, error codes, and number of steps for errors that occur in the FX PLC can be checked. Details can be checked immediately even for errors that occur during list editing.

Error message	Detail	Step
I/O configuration error	1010	
PC/HPP communication error	6201	

4 Commands and devices can be searched and displayed.

Commands and devices used in sequence programs can be searched.

The correction position can be searched for cases such as when you want to correct a specific device.

Searched device
M800

ChNo. [1]		< Read >			
Search device M 800		MODE	OP	MORE	CLR
		.	V	Z	SP
		STEP			
8	LD M 10	8	9		▲
9	OUT T 10				
	K 100	4	5	6	7 ▼
12	LD X 002	0	1	2	3 GO
13	OR X 020				
14	AND M 100				

Displays the searched device.

LD M 800

OUT T 10

LD K 100

X 002

5.2 Specifications

5.2.1 System configuration

This section describes the system configuration of the MELSEC-FX list editor.
For further information about communication units and cables for each connection form, see the following.

 GOT1000 Series Connection Manual

1 Controllers that can be edited with the MELSEC-FX list editor

Target controller
FXCPU

2 Connection forms

(○: Available, x: Unavailable)

Function name		Connection form between GOT and PLC						
Name	Description	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	MELSEC NET/10 connection	CC-Link connection	
							ID	G4*2
MELSEC-FX list editor	Sequence program writing, parameter setting, PLC diagnostics and keyword registration, etc.	x	○			x		

*1 Indicates CC-Link connection (Intelligent device station).

*2 Indicates CC-Link connection (via G4).

3 Required option OS and option function board

The option OS and option function board shown below are required.


Option OS	OS memory space (user area)					Option function board			
	GT16		GT15	GT11	GT10	GT16	GT15	GT11	GT10
	Built-in flash memory (ROM)	User memory (RAM)							
MELSEC-FX list editor	542KB	1024KB	1058KB	0KB	Not required	Not required	GT15-FNB, GT15-QFNB, GT15-QFNB16M, GT15-QFNB32M, GT15-QFNB48M, GT15-MESB48M	GT11-50FNB	Not required

(1) Option OS

(a) For GT16, GT15, and GT11

Install the option OS in the above table to the GOT.

Refer to the following manual for the procedure for installing the option OS.


 GT Designer2 Version □ Basic Operation/Data Transfer Manual (8. TRANSFERRING DATA)

- (b) For GT10
Installing the option OS is not required.

(2) OS memory space

The available memory space shown in the table above is required in the user area to install the option OS to the GOT.

Refer to the following manual for the procedure for checking the available memory space of the user area and information about the data using other user areas.

 GT Designer2 Version ☐ Basic Operation/Data Transfer Manual (8. TRANSFERRING DATA)

(3) Option function board


- (a) For GT16 and GT10

No option function board is required.


- (b) For GT15 and GT11

Mount one of the option function boards in the above table on the GOT.

For the GOTs with a built-in option function board, refer to the following.

 1.1.2 Hardware and OS' required for each function

For how to mount an option function board on the GOT, refer to the following manual.

 GT15 User's Manual (8.10 Option Function Board)


GT11 User's Manual (8.3 Option Function Board)

4 Functions list and monitor conditions

The following shows the memory that can be monitored by the MELSEC-FX list editor and the FX PLC status conditions.


(○ : Can be monitored △ : Can be monitored under certain conditions × : Cannot be monitored)

Function		Memory that can be monitored *2				FX PLC status	Reference
		Built-in memory	RAM memory cassette	EEPROM memory cassette, flash memory cassette	EPROM memory cassette		
Reading sequence programs	Displaying sequence programs	○	○	○	○	RUN/ STOP	Section 5.4.3
	Searching commands/ devices						Section 5.4.4
Writing sequence programs	Writing commands	○	○	△ *1	×	For Stop only	Section 5.4.5
	Changing operands/set values						Section 5.4.6
Inserting commands							Section 5.4.5
Deleting commands							Section 5.4.7
Sequence program all clear							Section 5.4.8
PLC diagnostics							Section 5.4.9
Parameter setting	Display	○	○	△ *1	×	For Stop only	Section 5.4.10
	Set						
Keyword		○	○	○	○	RUN/ STOP	Section 5.4.11

- *1 The operation is available only when the protect switch is OFF.
 - *2 The available memory differs depending on the FX PLC being used.
For further information, see the following manual.
-  The hardware manual of the FX PLC being used

5.2.2 Access range

The access range is the same as the access range when the GOT is connected to a controller.
Refer to the following manual for details of the access range.

 GT Designer2 Version ☐ Screen Design Manual (2.7 Controllers that can be monitored and the Access Range)

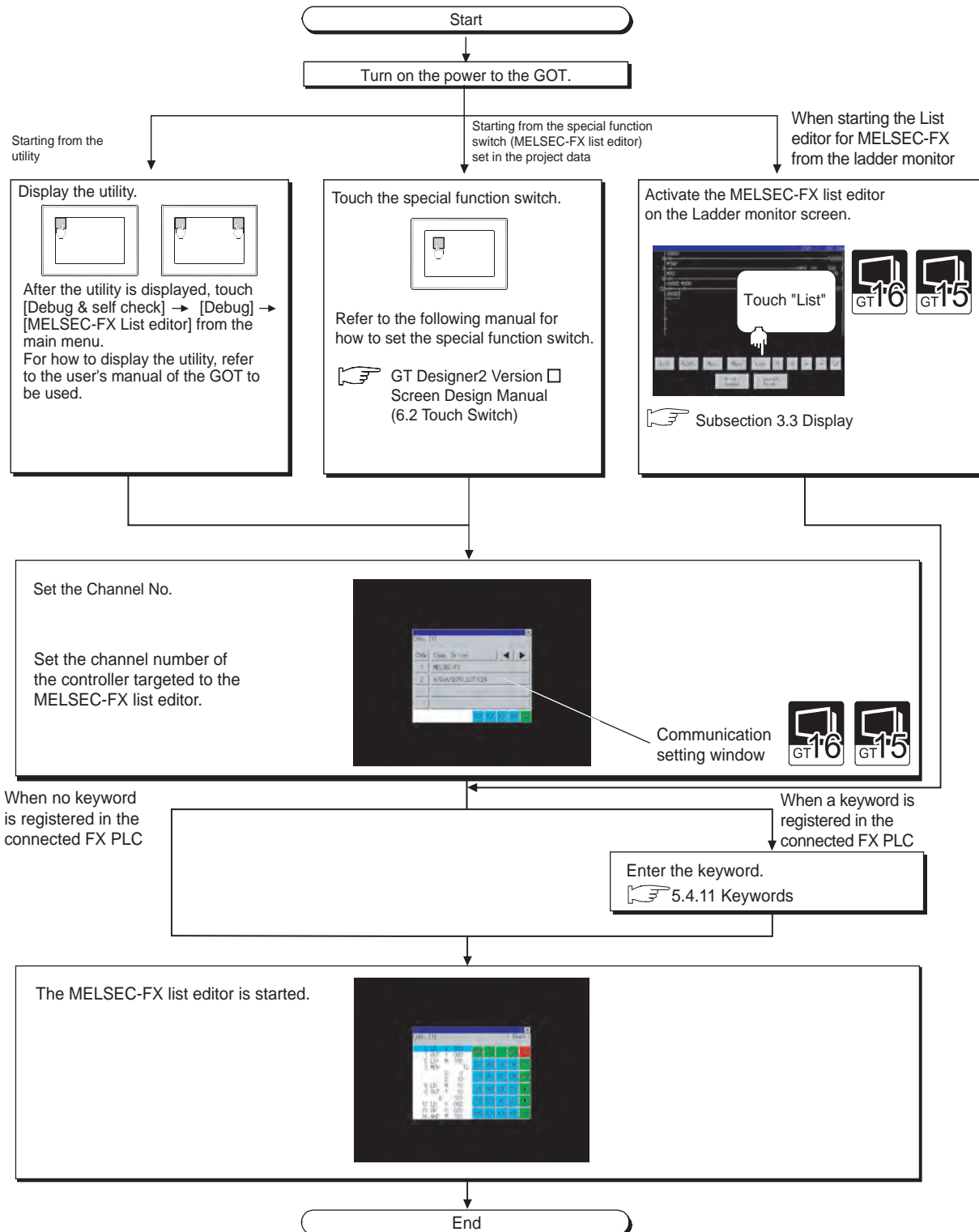
5.2.3 Precautions

- (1) GOT to be used
The FX list editor function cannot be used with the GT1030 and GT1020.
- (2) Using other peripheral equipment for sequence program/parameter change
When using the MELSEC-FX list editor, do not change programs or parameters in the PLC CPU from other peripheral equipment.
If you make a change, temporarily exit the MELSEC-FX list editor after the change is made, then start the MELSEC-FX list editor again.
If you carelessly change the program on one PLC from multiple units of peripheral equipment (including GOT), the contents of the program in the PLC CPU and the peripheral equipment may not be the same, resulting in an unintended operation of the PLC CPU.
- (3) Sequence program change
Stop the FX PLC before changing (writing, inserting, deleting) a sequence program or changing parameters.
Operation is not possible with the FX PLC running.
- (4) If you press the **[GO]** key but the system does not proceed to the next operation (for example, a search)
Check the input contents (applied instruction number, device value, etc.).
- (5) When used together with the ladder monitor
Even if you execute the MELSEC-FX list editor with the ladder monitor activated, edited information will not be reflected on the Ladder Monitor screen.
To reflect such edited information, perform the PLC reading of the ladder monitor again.
- (6) When using list monitor
Only devices to be used for basic instructions can be monitored.
The status of devices (word, bit) to be used for application instructions cannot be monitored.



5.3 Display

1 Outline until the start

This subsection describes an outline until the system monitor screen is displayed after List editor for MELSEC-FX (Option OS) is installed in the GOT.

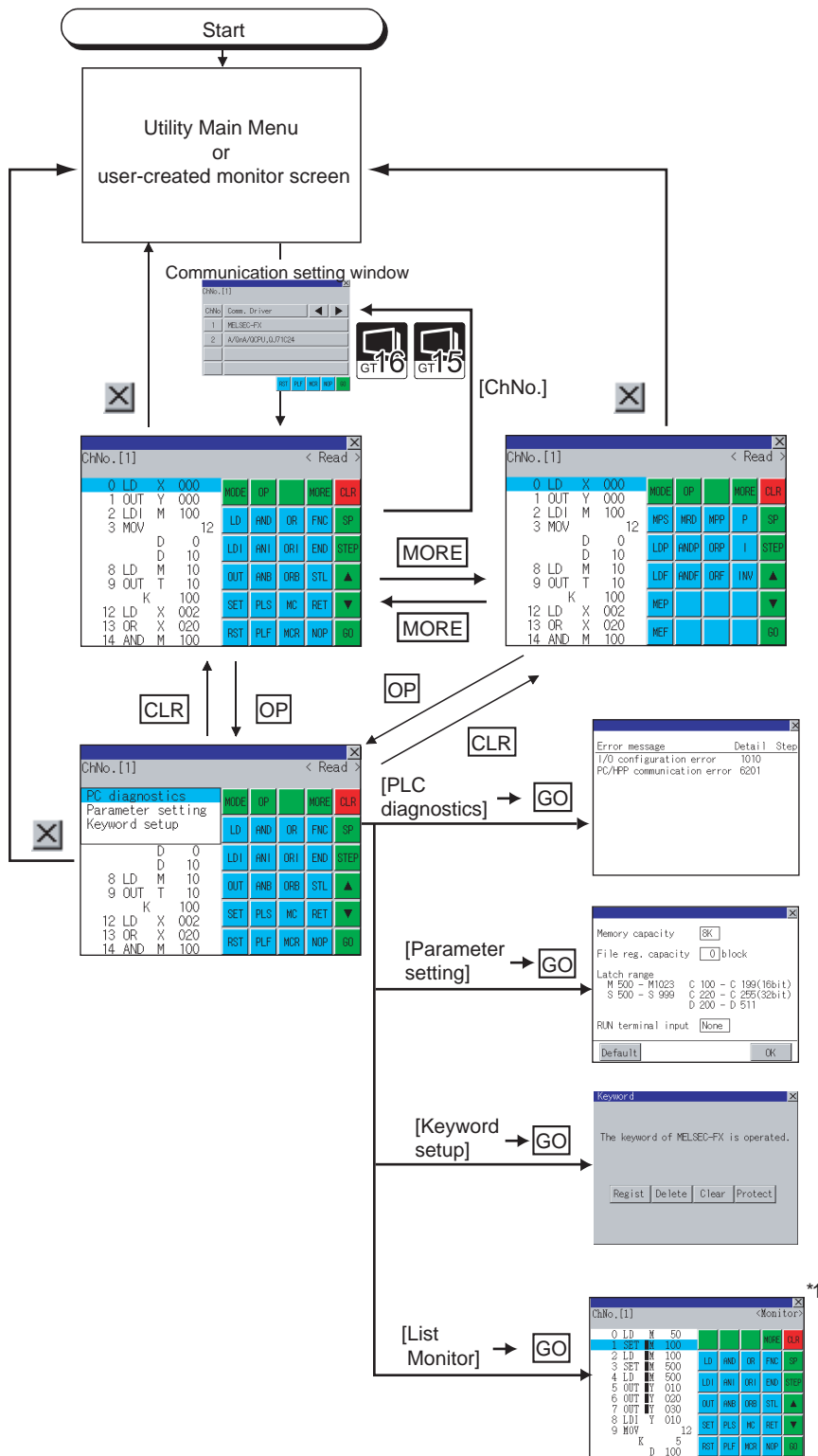




- (1) How to display the utility
For how to display the utility, refer to the following.
 -  GT16 User's manual (8.3 Utility Display)
 - GT15 User's manual (9.3 Utility Display)
 - GT11 User's manual (9.3 Utility Display)
 - GT10 User's manual (8.2 Utility Display)
- (2) Displaying communication setting window
After turning on the GOT, the communication setting window is displayed at the first startup of the MELSEC-FX list editor only.
For displaying the communication setting window at the second or later startup, touch [ChNo.] on the MELSEC-FX list editor screen. ( 5.4 Operation Method)
- (3) If the project data has not been downloaded
The MELSEC-FX list editor can be started from the utility even if the project data has not been downloaded to the GOT.

2 Change screens

This section describes how to change the screen.



- *1 With setting special function switches (FX list monitor), the list monitor can be started on the monitor screen. When the list monitor is started on the monitor screen, the list editor cannot be used. For how to set special function switches, refer to the following manual.

☞ GT Designer2 Version □ Screen Design Manual (6.2 Touch Switch)

5.4 Operation Procedures

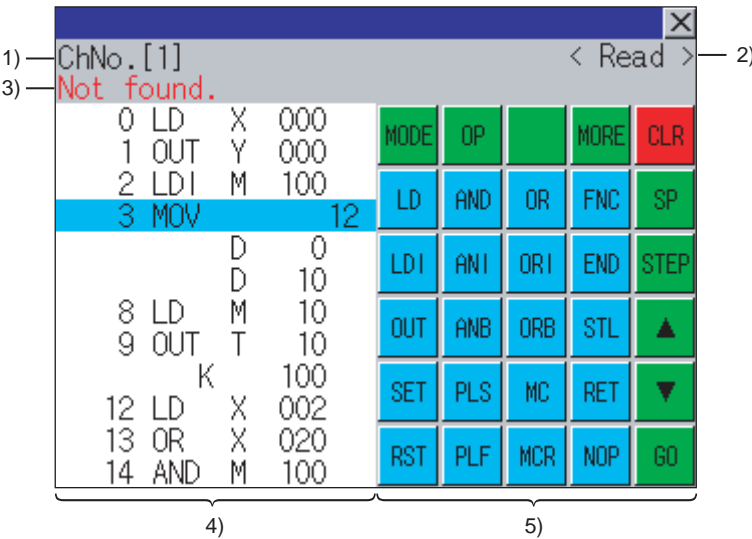
This section describes the contents of the MELSEC-FX list editor and the key functions displayed on the screen.


The display screen of the MELSEC-FX list editor varies slightly with the GOT used. This chapter mainly uses the screen of the GT1575-V for explanation.

5.4.1 Key arrangement and a list of key functions

The arrangement and functions of the keys displayed on the MELSEC-FX List Editor window are described below.


















1 Displayed contents



No.	Item	Description
1)	Channel No. 	Displays the currently selected channel number. Touching "ChNo." displays the communication setting window. The communication setting window is not displayed if the MELSEC-FX list editor is started from the ladder monitor.
2)	Mode	Displays a mode for MELSEC-FX list editor. (5.4.2 Selection and operation of modes) [Monitor] is displayed when the list monitor is executed. (Section 5.4.12 List monitor)
3)	Error message	Displays the contents of errors that occur with the MELSEC-FX list editor. (5.5 Error Messages and Corrective Action)
4)	List display area	Displays the sequence program in list format (12 digits). The position (line) that can be edited is displayed with a bar.
5)	Key area	Displays the keys that can be used with the MELSEC-FX list editor.

2 Key functions

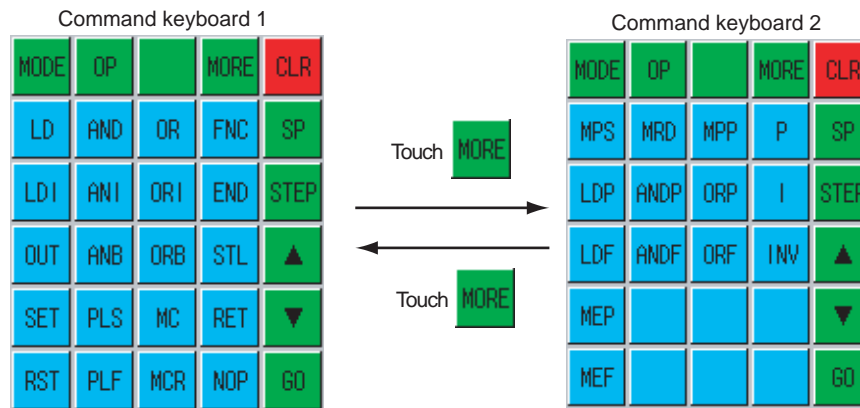
The table below shows the functions of the keys that are used for the operation on the MELSEC-FX list editor screen.

Key	Function
  	<p>Displays the communication setting window.</p> <p>The communication setting window is not displayed if the MELSEC-FX list editor is started from the ladder monitor.</p>
	<p>Selects a mode for MELSEC-FX list editor. (☞ 5.4.2 Selection and operation of modes)</p>
	<p>Displays the PLC diagnostics, parameter setting, and keyword selection menu.</p>
	<p>Switches between command keyboard 1 and command keyboard 2.</p> <p>(☞ 3 "Keyboard switching" in this section)</p>
	<p>When inputting commands :Cancels the key input when only part of the command has been input.</p> <p>(☞ Section 5.4.14 Action for an incorrect key input)</p> <p>When option menu is displayed: Closes the option menu.</p> <p>Commands cannot be deleted with this key. (☞ 5.4.7 Deleting commands)</p>
	<p>Space key.</p> <p>This key is used when setting timers and counters, writing applied commands, etc.</p>
	<p>Displays the list from a specified step No. when the step No. is input.</p>
 	<p>Moves the list display area bar up and down and switches the line being edited.</p>
	<p>Determines the key operation.</p>
 to  ,  to  , etc.	<p>Inputs commands, device names, etc.</p> <p>The key contents depend on the input contents.</p> <p>The commands that can be used differ depending on the target FX PLC.</p> <p>Refer to the manual for the FX PLC to be used.</p>
	<p>Exits the MELSEC-FX list editor.</p>

3 Keyboard switching

Touching the **MORE** button switches the command keyboard 1 and command keyboard 2.

When you touch the button for a keyboard function, the optimum keyboard for input for that function is displayed automatically.

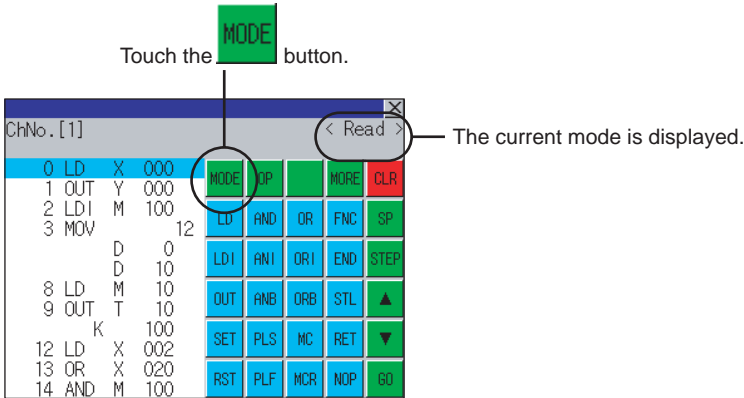


5.4.2 Selection and operation of modes

The MELSEC-FX list editor has four modes: READ, WRITE, INSERT, and DELETE.
Select an appropriate mode for the intended operation.
For more information on the mode to select, refer to the function operations from subsection 5.4.3 onward.

1 How to change modes

Touch the **MODE** button.
Each time you touch this button, the mode changes.



2 In the case the mode cannot be changed

In the following cases, only READ mode is allowed.
If you try to change to other than READ mode, an error message is displayed.
To change to other than READ mode, take the action below.

Error Message	Description	Corrective action
PLC is running	The FX PLC is in the RUN status.	Stop the FX PLC.
Can not write.	The protect switch of the EEPROM memory cassette is on.	Switch off the protect switch of the EEPROM memory cassette.
	The EPROM memory cassette is enabled.	Set a memory other than EPROM as the memory to write to.

5.4.3 Sequence program display

Sequence programs are read from the FX PLC to the GOT and displayed.
There are two displaying methods: specifying the step number, and scrolling one screen at a time.

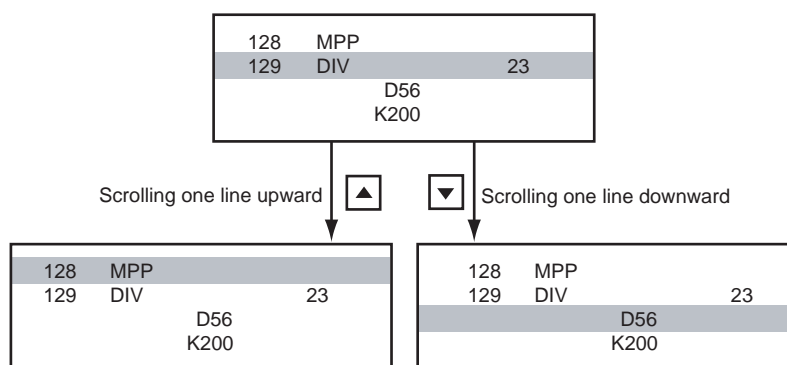
1 Display using cursor keys

(1) Operation

Scroll with  or .


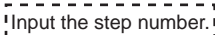

(2) Example

Scroll one line upward or downward.



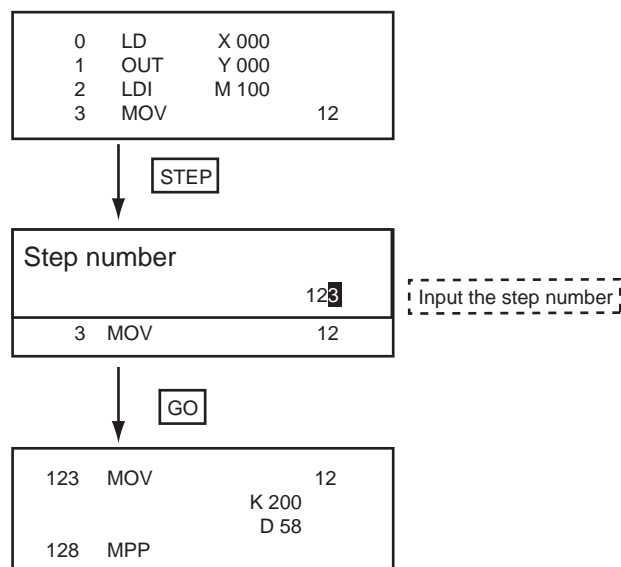
2 Display specifying the step number

(1) Operation

 →  → 

(2) Example

Displaying step number 123.

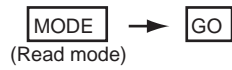


When the specified step number is the operand of an applied instruction

If the specified step number is a timer (T) or counter (C) set value or the operand of an applied instruction, that command section is displayed at the head.

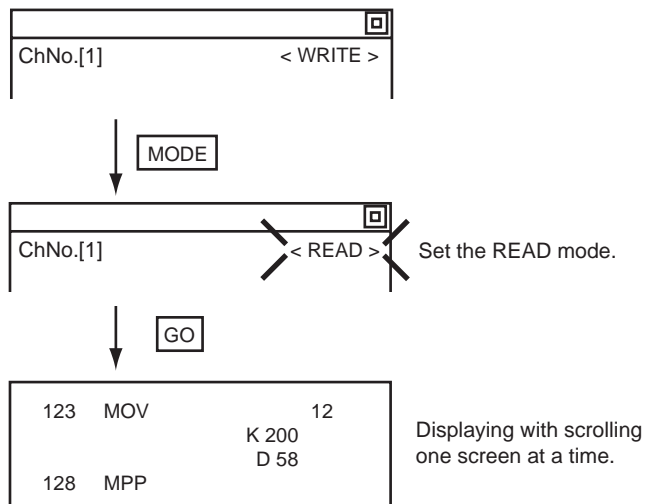
3 Display scrolling one screen at a time

(1) Operation



(2) Example

Displaying with scrolling one screen at a time.



5.4.4 Searching commands and devices

Displays a command or device by searching it in sequence program from Step 0.

1 Command search

(1) Operation



*1 If the command you want to search for is not on the keyboard, touch the **[MORE]** key to switch to the other keyboard.

When searching for an applied instruction, touch the **[FNC]** key and input the applied instruction number.

When searching for a label, touch **[P]** or **[I]** and input the pointer number.

(5.4.5 **2** Writing applied instructions)

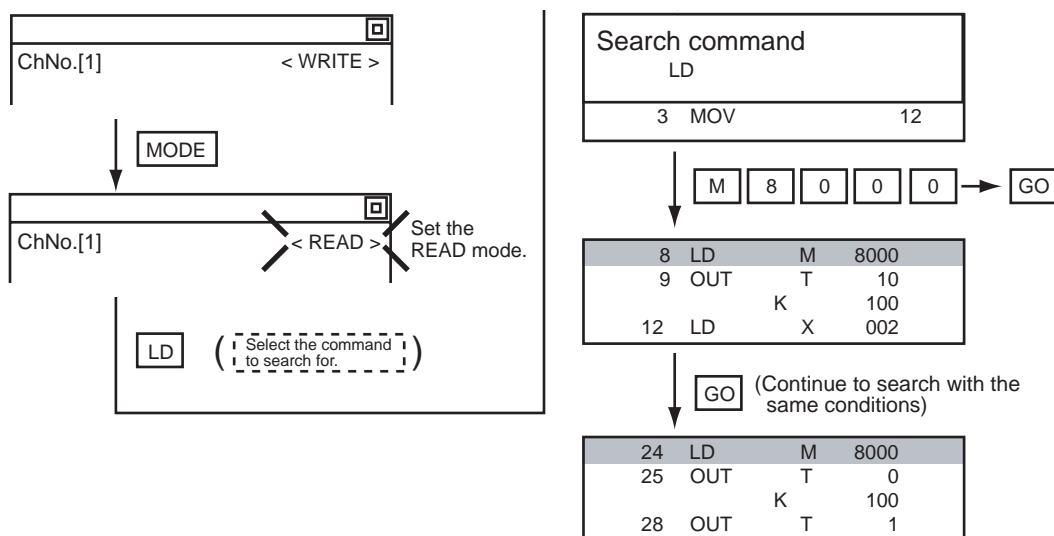
*2 Input only when searching for commands requiring a device name and device number.

*3 After the search results are displayed, you can continue searching with the same conditions by touching the **[GO]** key.

Touching any key other than the **[GO]** key ends the search.

(2) Example

Searching for LD M8000



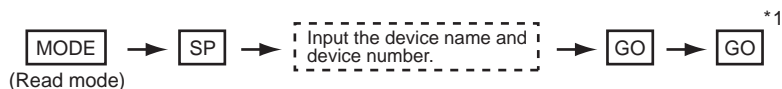
Pointer (P, I) searches

For pointer searches, only labels are searched.

Pointers specified as operands in applied instructions are not searched.

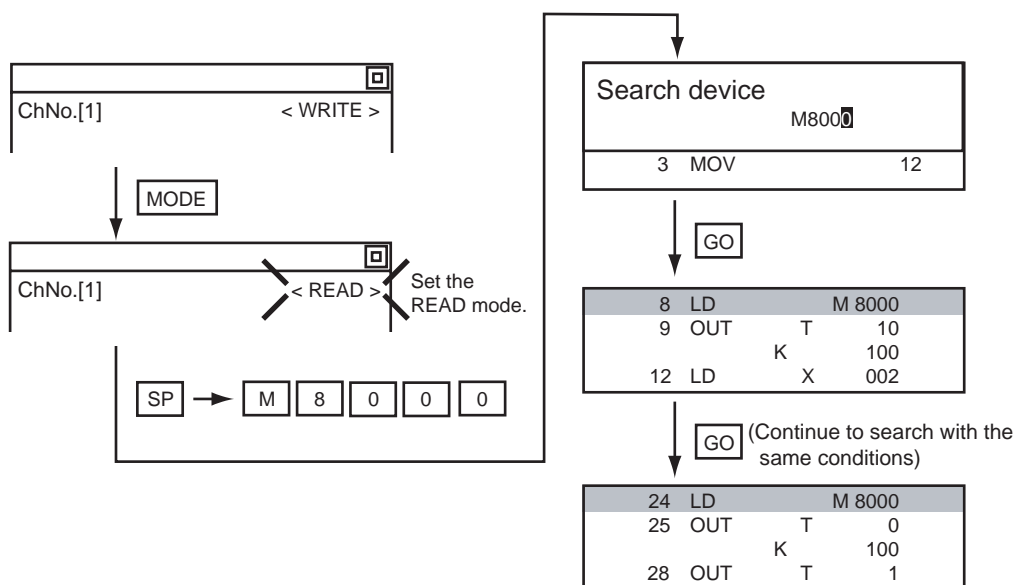
2 Device search

(1) Operation



*1 After the search results are displayed, you can continue searching with the same conditions by touching the **GO** key.
Touching any key other than the **GO** key ends the search.

(2) Example Searching for LD M8000



Point

Devices that cannot be searched

The following devices cannot be searched.

- Pointers, interrupt pointers
- Constant K, constant H, constant E
- Bit devices with specifying numbers only
- Special function unit/block buffer memory
- Devices specified with the operand of an applied instruction

Pointers and interrupt pointers can be searched for with command searches.

(1 "Command search" in this section)

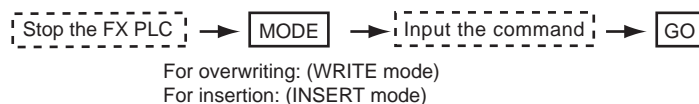
5.4.5 Writing commands

Writes a sequence program to the FX PLC. (Overwrite/Insert)

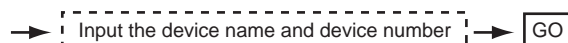
1 Writing basic commands

(1) Operations

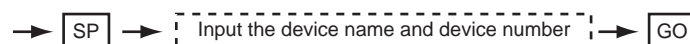
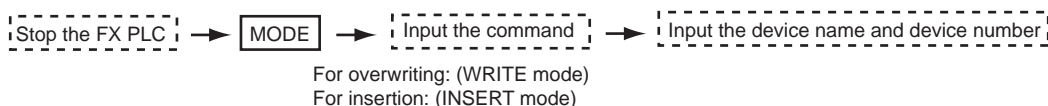
(a) Inputting command only (Ex.: ANB, ORB command etc.)



(b) Inputting command and device (LD, AND commands etc.)



(c) Inputting command, No. 1 device, No. 2 device (MC, OUT (T, C) commands, etc.)



Point

Moving the cursor to the position to write the command

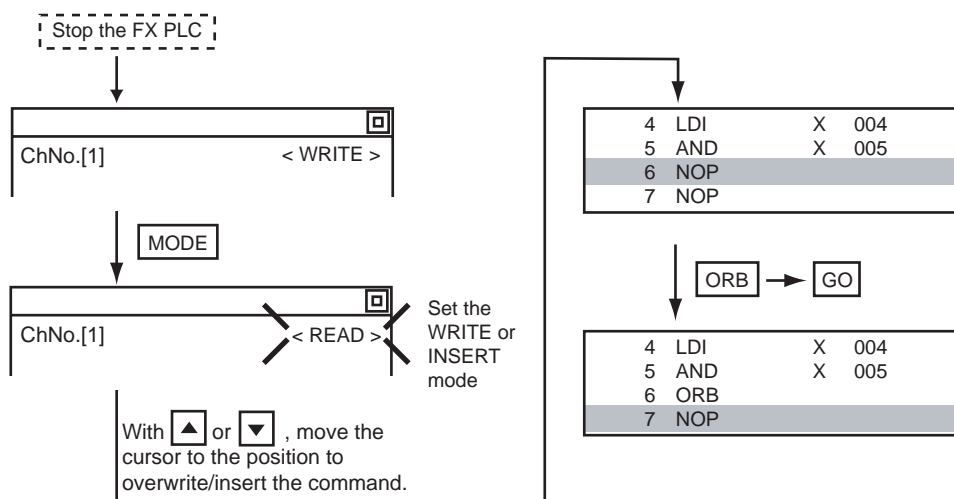
When starting to write a command, place the cursor on the command line (the line on which the step number is displayed).

You cannot write a command with the cursor on an operand or set value line.

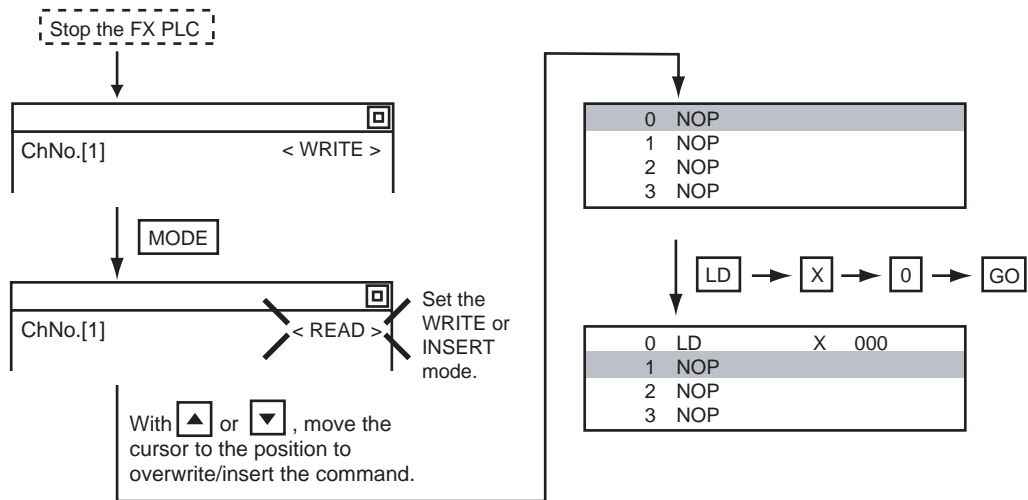
2	LDI	M	100	} Command line (Place the cursor on this line.)
3	MOV		12	
		D	0	} Operand, set value line (Cannot operate on this line.)
		D	10	

(2) Example

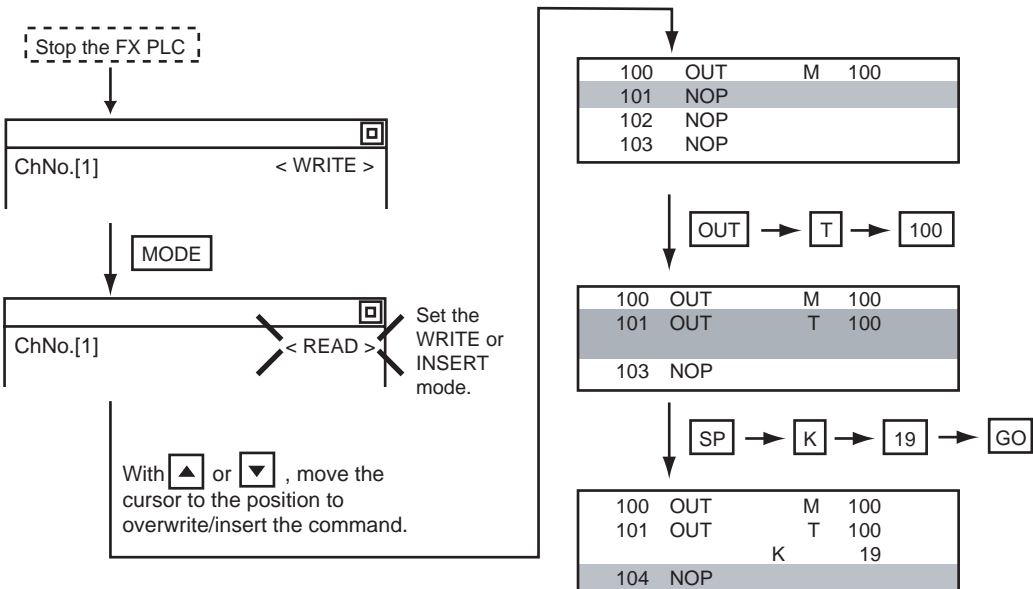
(a) Writing ORB command



(b) Inputting LD X000

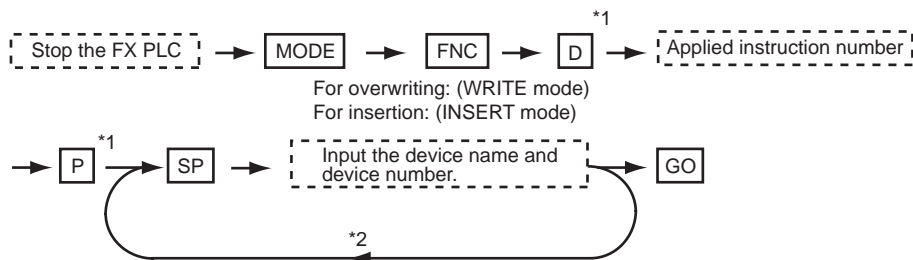


(c) Inputting OUT T100 K19



2 Writing applied instructions

(1) Operations



*1 **D** (double word command) and **P** (pulse execution format command) can also be input after the applied instruction number is input.

Inputting in the order **P** → **D** is also possible.

*2 When a command specifies multiple devices for operations, input the **SP** key followed by the device name and device number.

Point

(1) Moving the cursor to the position to write the command

When starting to write a command, place the cursor on the command line (the line on which the step number is displayed).

You cannot write a command with the cursor on any other line.

2	LDI	M	100	
3	MOV			12
		D	0	
		D	10	

Command line (Place the cursor on this line.)

Operand, set value line (Cannot operate on this line.)

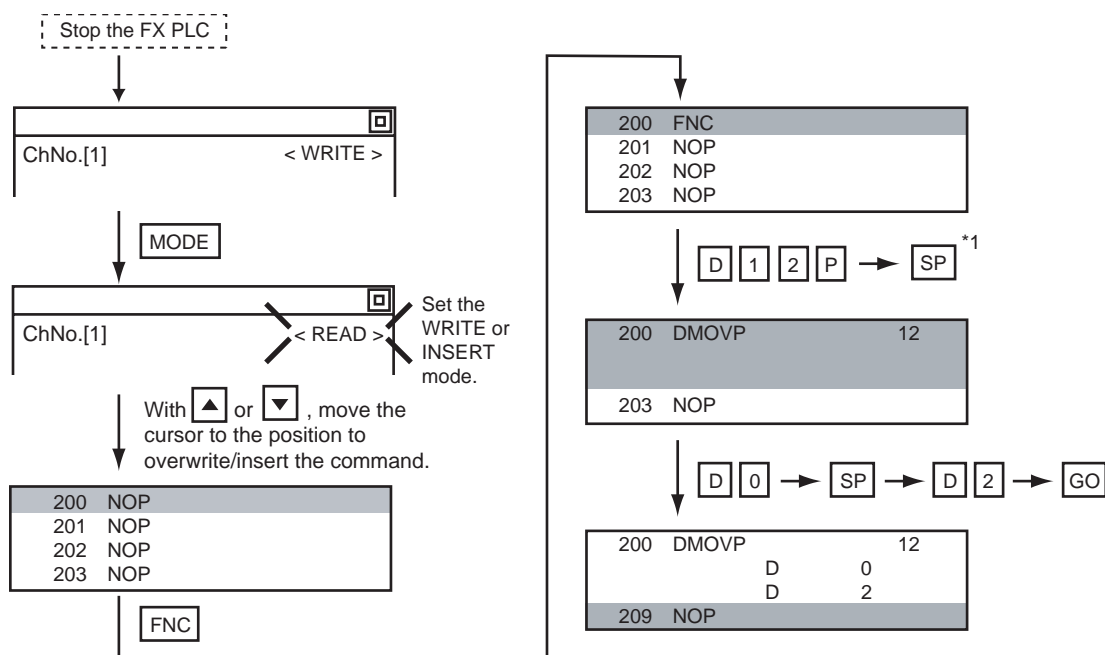
(1) Commands using a text string constant for a command operand (such as ASC command)

With the MELSEC-FX list editor, text string constants cannot be written as operands. (such as ASC commands)

Use GX Developer for writing such commands.

(2) Example

Input "DMOVP D0 D2".

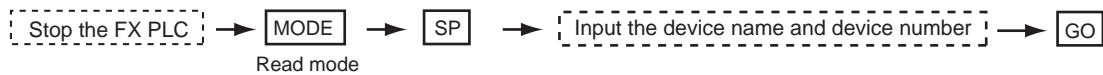


*1 The MOV command is FNC12.

5.4.6 Changing operands, set values

Changes the operand section of an applied instruction and OUT (T, C) command set value.

1 Operation



*1 For decimal numbers, input K, then the number.
For hexadecimal numbers, input H, then the number.

Point

Moving the cursor to the line on which the operand or set value is to be changed

When starting to change an operand or a set value, place the cursor on the line of the operand or set value to be changed (the line on which the step number is not displayed).

If you place the cursor on the command line, the input operation is not possible.

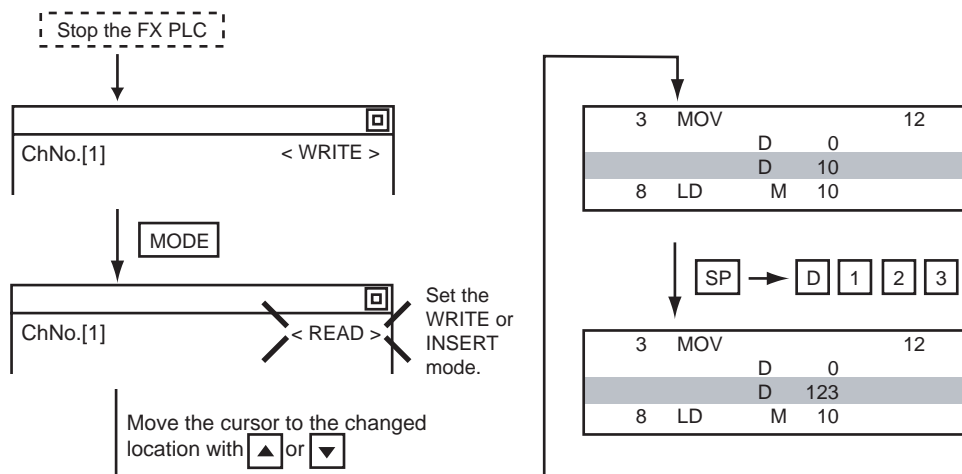
2	LDI	M	100	
3	MOV			12
		D	0	
		D	10	

} Command line (Cannot operate on this line.)

} Operand, set value line (Place the cursor on this line.)

2 Example

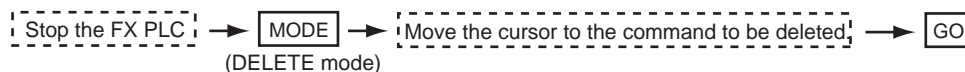
Changing "MOV D0 D10" to "MOV D0 D123"



5.4.7 Deleting commands

Deletes one command at a time from a sequence program.

1 Operation



Point

When moving the cursor to the position where the command is to be deleted.

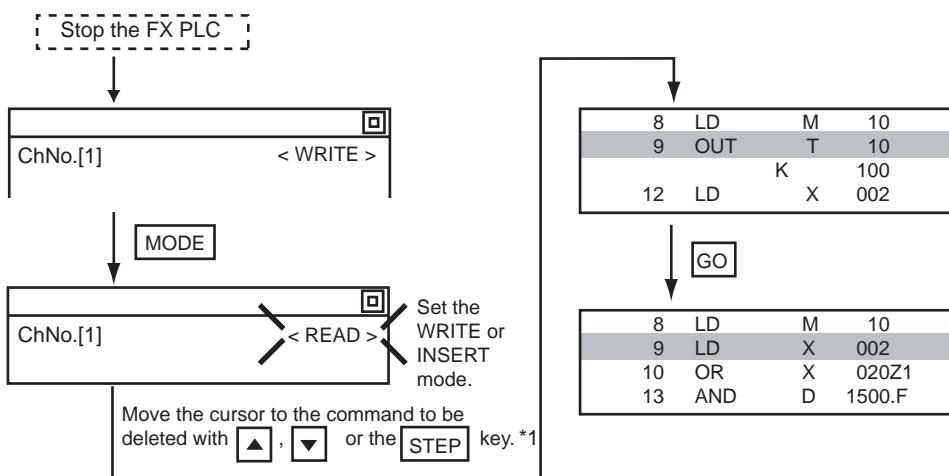
Place the cursor on the command line (the line on which the step number is displayed).

You cannot delete the command if the cursor is placed on the line of an operand or set value.

2	LDI	M	100	} Command line (Place the cursor on this line.)
3	MOV		12	
		D	0	} Operand, set value line (Cannot operate on this line.)
		D	10	

2 Example

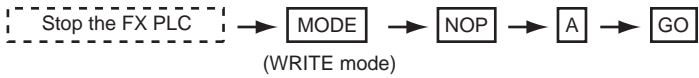
Deleting "OUT T10 K100"



5.4.8 Sequence program all clear

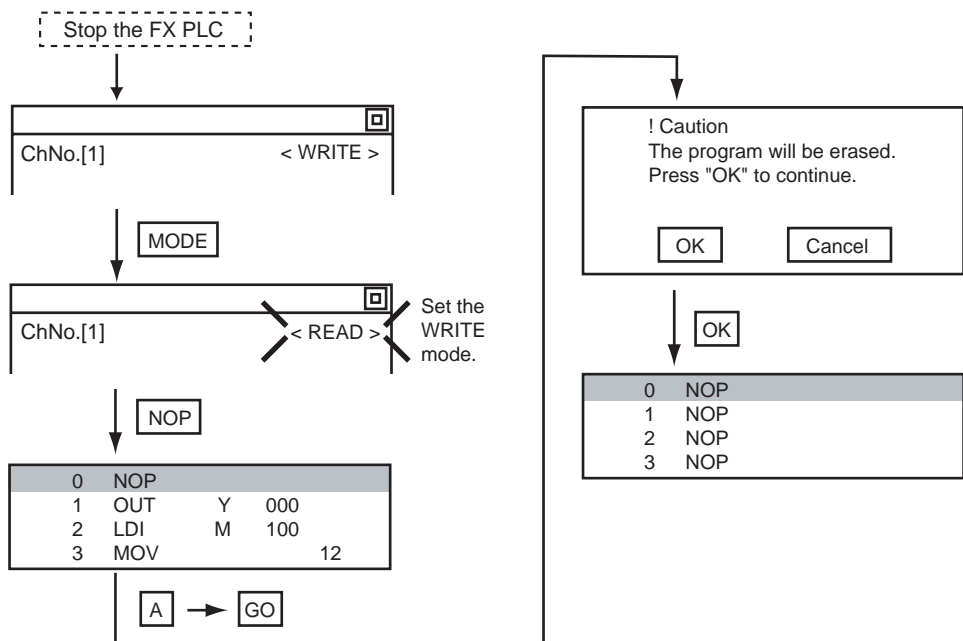
Clears all the sequence programs.

1 Operation



2 Example

Clears all the sequence programs.



Point

Items cleared when All Clear for a sequence program is performed

When All Clear is executed, the parameters before program execution are initialized and Latch Clear is executed.

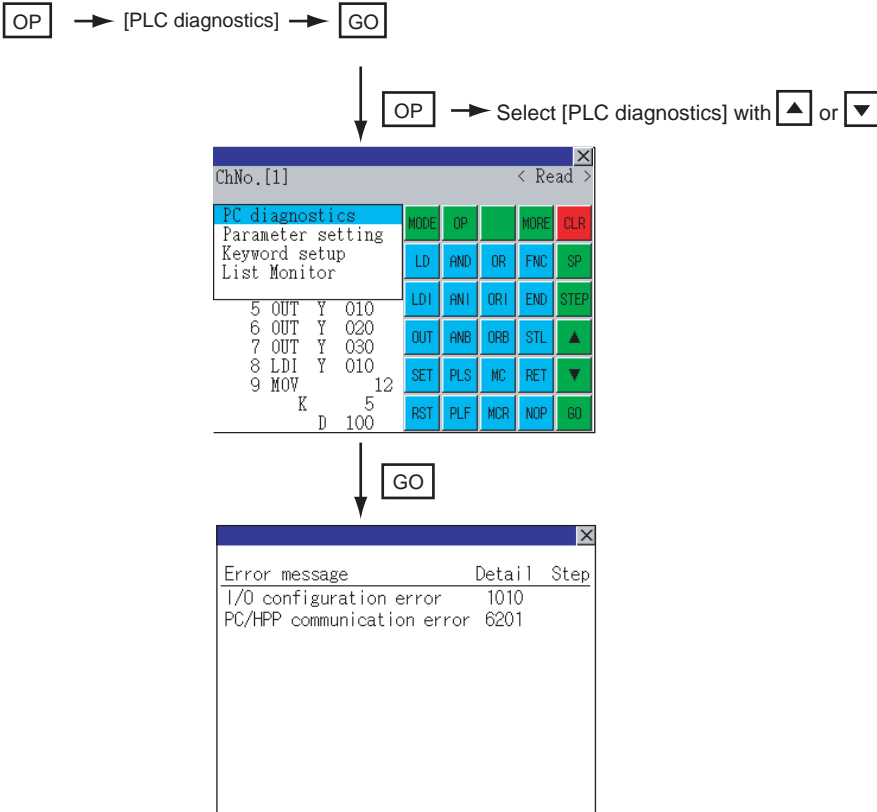
The memory space becomes the default value, the comment area a 0 block, the file register space a 0 block, and keywords unregistered.

After All Clear, set the above parameters etc. again.

5.4.9 PLC diagnostics

Displays the FX PLC error message, error code, and step at which the error occurred.

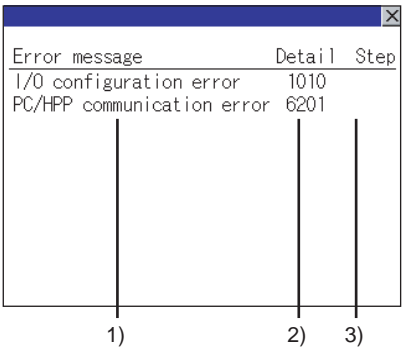
1 Operation



2 PLC diagnostics screen

The following describes the contents displayed on the PLC diagnostics screen and the function of on-screen key.

(1) Displayed contents



No.	Item	Display contents
1)	Error message	Displays the error message. (I/O configuration error/PLC hardware error/PC/HPP communication error/Serial communication error/Parameter error/Syntax error/Circuit error/Operation error)
2)	Detail	Displays the error code.
3)	Step	Displays the step number in the sequence program at which the error occurred. (This is displayed only for a syntax error, circuit error, or operation error.)



Error details

For details on an FX PLC error, refer to the manual below.



Programming manual for the FX CPU used

(2) Key functions

The table below shows the functions of the keys that are used for the operation on the PLC diagnostics screen.

Key	Function
	Exits the PLC diagnostics.

5.4.10 Parameter setting

Sets FX PLC parameters.

1 Parameters that can be changed and change targets

(1) Parameters that can be changed

The parameters that can be changed with the MELSEC-FX list editor and the target FX PLCs are as follows.

(○ : Can be set/changed × : Cannot be set/changed)

Item	Target CPU							
	FX0(S) /FX0N	FX1	FX2(C)	FX1S	FX1N(C)	FX2N(C)	FX3G	FX3U(C)
Memory space setting	×	○	○	×	×	○	○	○
File register space setting	○ ^{*1}	×	○	○	○	○	○	○
Latch range setting	×	○	○	×	×	○	×	○
RUN terminal setting	×	×	×	○	○	○	○	○
Initialization of parameters	○	○	○	○	○	○	○	○

*1 When connecting an FX0(S), set "0".

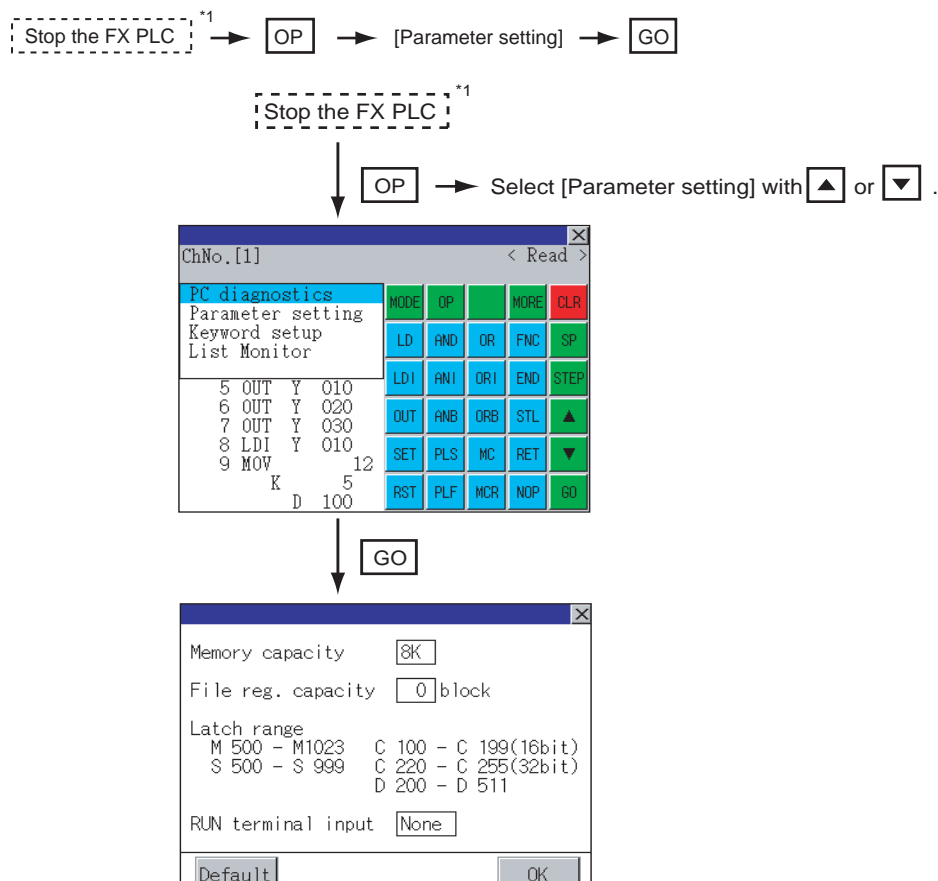
Setting other than "0" causes a parameter error.

*2 When the parameters are initialized, the display on the MELSEC-FX list editor is different from the FX PLC default values, but do not change the latch range. Changing the latch range causes an error.

(2) Change targets

When a memory cassette is mounted, the parameters in the memory cassette are targeted for changes.

2 Operation



*1 When checking parameters (not changing), it is not necessary to stop the PLC.

3 Parameter setting screen

The following describes the contents displayed on the PLC diagnostics screen and the function of on-screen keys.

(1) Displayed contents

1) Memory capacity

2) File reg. capacity block

3) Latch range
M 500 - M1023 C 100 - C 199(16bit)
S 500 - S 999 C 220 - C 255(32bit)
D 200 - D 511

4) RUN terminal input

5)

No.	Item	Display contents
1)	Memory capacity	Sets the memory space (number of steps). If you touch the <input type="text" value="8K"/> section, you can change the memory space.
2)	File reg. capacity	Sets the memory space (number of blocks) allocated to the file register. Touch the <input type="text" value="0"/> section and input the number of blocks.
3)	Latch range	Sets the latch range (power failure hold area). Touch the number display section and input the value.
4)	RUN terminal input	Sets whether or not to use one of the FX PLC input terminals for RUN input. Touch the <input type="text" value="None"/> section and set the device to be set for the RUN terminal.
5)	Default	Initializes the parameters

Point

Memory space for kana comments after changing memory space, file register space

If the memory space is set smaller than the total of the file register space and kana comment space, the kana comment space is automatically reduced.

(With the MELSEC-FX list editor, the kana comment space is not displayed.)

Note that if any setting as described below is made, the kana comment space is reduced.

(Settings that reduce kana comment space and the kana comment space after setting change)

Settings resulting in $N_m < N_f \times 500 + N_k \times 500 + 500$

$$\text{Kana comment space (steps) after setting change} = \frac{N_m - N_f \times 500 - 500}{500}$$

N_m : Memory space after change (steps)

N_f : File register space after change (blocks)

N_k : Comment space before change (blocks)

Remark

Settable range and default value




The settable range and the default value depend on the FX PLC type.

Refer to the following manual for details of the settable range and the default value.

Programming manual for the FX PLC used

(2) Key functions

The table below shows the functions of the keys that are used for the operation on the parameter setting screen.

Key	Function
	Initializes the parameters
	Completes the changed setting contents.
	Ends parameter setting.

5.4.11 Keywords

Registers, deletes, releases protection for, and sets protection for the FX PLC keywords.

1 Function usability of the MELSEC-FX list editor for keyword protection levels

The functions that can be used with the MELSEC-FX list editor depend on the keyword protection level.
(○ : Available, × : Unavailable)

Function		Keyword protection level				Reference
		All operation protect (All on-line operation protect) *2	Read/Incorrect write protection (Read/write protect) *2	Incorrect write protect (Write protect) *2	Keyword not registered/keyword protection canceled	
Reading sequence programs	Displaying sequence programs	×	×	○	○	5.4.3
	Searching commands/ devices	×	×	○	○	5.4.4
Writing sequence programs	Writing commands	×	×	×	○	5.4.5
	Changing operands/set values	×	×	×	○	5.4.6
Inserting commands		×	×	×	○	5.4.5
Deleting commands		×	×	×	○	5.4.7
Sequence program all clear		×	×	×	○	5.4.8
PLC diagnostics		○ *1	○	○	○	5.4.9
Parameter setting		×	×	×	○	5.4.10

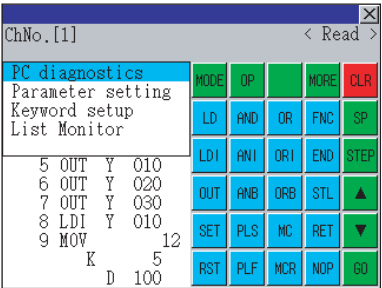
*1 When the 2nd keyword is set to an FX PLC that supports 2nd keyword, it becomes "×" (cannot be used).

*2 The names within the parentheses () are for when a keyword + 2nd keyword is set.

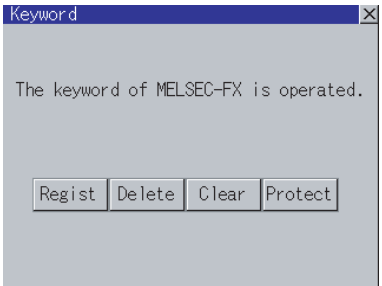
2 Operation

OP → [Keyword setup] → GO

↓
OP → Select [Keyword setup] with ▲ or ▼.




↓
GO



3 Keyword screen and protection level


When [Keyword setup] is selected with the MELSEC-FX list editor, the keyword screen is displayed. Refer to the following manual for the procedure for keyword operations.

-  GT16 User's Manual (10.2.3 Display contents of communication detail settings)
- GT15 User's Manual (10.2.3 Display contents of communication detail settings)
- GT11 User's Manual (10.2.3 Display contents of communication detail settings)
- GT10 User's Manual (11.4 Keyword)

Remark

Keywords

Refer to the following manual for details of keyword.

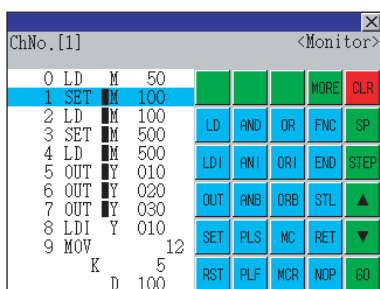
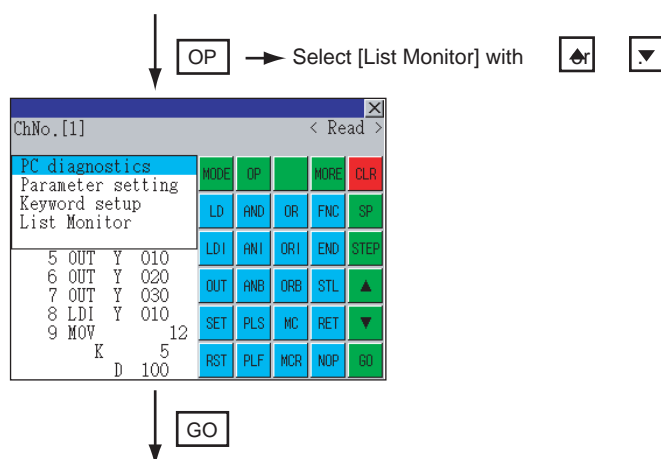
-  Programming manual for the FX PLC used

5.4.12 List monitor

The status of contacts and coils in a sequence program is displayed.

1 Operation

[OP] → [List Monitor] → [GO]



When the list monitor is started on the FX list editor screen, the step numbers displayed on the FX list editor screen is displayed on the list monitor screen.



Starting list monitor with special function switches (FX list monitor)

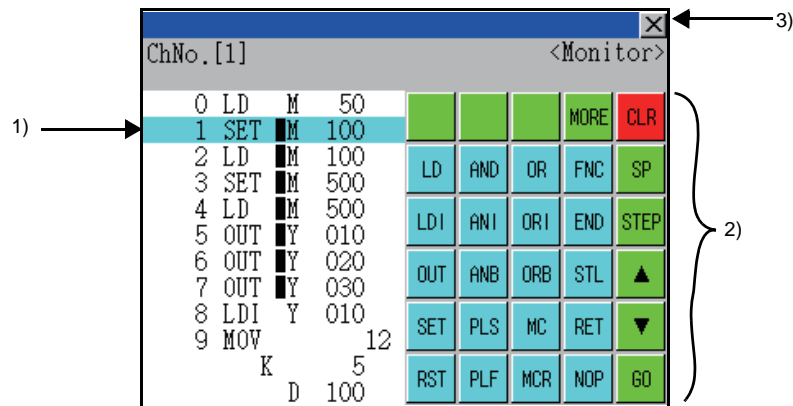
With setting special function switches (FX list monitor), the list monitor can be started on the monitor screen.



When the list monitor is started on the monitor screen, the list editor cannot be used.

For how to set special function switches, refer to the following manual.

2 Displays and key functions

The following describes the displays for the list monitor.



No.	Item	Display contents
1)	List display area*1	The status of contacts and coils is displayed on the left of device displays.
2)	Keys	The same operations as in the READ mode of the FX list editor can be executed.  Section 5.4.3 Sequence program display
3)		Ends the list monitor. When the list monitor is executed on the FX list editor screen, the screen is switched to the FX list editor screen.

*1 The status of contacts and coils is displayed as below.

Type of instructio	Description	Status	
		■ Displayed	■ Not displayed
LD, AND, ORC(contact instruction (Normal open))	Contact	ON	OFF
LDI, ANI, ORI(Contact instruction (Normal close))	Contact	OFF	ON
OUT, SET	TC: Coil	ON	OFF
	Except TC: Contact	ON	OFF
RST	TC: Reset	ON	OFF
	Word device	Value: 0	Value: Except 0
	Except TC and word device: Contac	OFF	ON
MC, STL	Contact	ON	OFF
LDP, ANDP, ORP, LDF, ANDF, ORF (Rise or fall contact instruction)	Not monitored	Always ■ not displayed	

5.4.13 Hard copy output



Screens of the MELSEC-FX list editor can be stored to a memory card in BMP/JPEG file format or printed with a printer.

Refer to the following for the hard copy.

- Starting the MELSEC-FX list editor from the ladder monitor (☞ 3.4.2 Hard copy output)
- Setting the hard copy with GT Designer2

☞ GT Designer2 Version □ Screen Design Manual (Section 13.2 Hard Copy)

5.4.14 Action for an incorrect key input

If an incorrect key is input, cancel the input contents.

1 Operation

- (1) Before touching the **GO** key (before reading/writing the input contents)

Before touching the **GO** key, touch the **CLR** key.



- (2) After touching the **GO** key (after reading/writing the input contents)

Write the command again. (☞ 5.4.5 Writing commands)

Commands finalized by writing and inserting operations are revised (overwritten) with the program writing.

5.5 Error Messages and Corrective Actions

This section describes the error messages displayed when the MELSEC-FX list editor is executed, and corrective action.

Error Message	Description	Corrective action
Can not display while protected.	The all-operation protect, anti-plagiarism, or incorrect write protect keyword is set.	<ul style="list-style-type: none"> Check the protected operation. Clear the keyword protection or delete the keyword.  Section 5.4.11 Keywords
Can not operate while protected.		
PLC parameter error.	An FX PLC parameter is defective.	Set correct parameters in the FX PLC.
PLC communications error.	The communication with the FX PLC is defective.	<ul style="list-style-type: none"> Check the FX PLC, cable, and GOT for abnormality. Check whether the communication settings are correct or not.
PLC is running.	A writing operation etc. has been made while the FX PLC is running.	Stop the FX PLC.
Can not write.	<ul style="list-style-type: none"> The memory to write to is EPROM. The protect switch of the EEPROM is on. 	<ul style="list-style-type: none"> Set other than EPROM for the memory to write to. Switch off the protect switch of the EEPROM.
Step number is out of a range.	The specified step number exceeded the maximum number.	Specify a step number below the maximum value.
Not found.	The specified command cannot be found.	Proceed to the next operation.
Not found.	The specified device cannot be found.	Proceed to the next operation.
Step overflow.	The program may exceed the available space. (Writing is not executed.)	Check the program memory space and delete commands to keep it within the space.  Section 5.4.7 Deleting commands
Command error.	An invalid command (non-existent command) was specified.	Input the correct command.



How to erase an error message

An error message is not erased even if the cause of the error is eliminated.
To erase an error message, touch a key on the MELSEC-FX list editor screen.

MEMO

[illegible]

6. INTELLIGENT MODULE MONITOR



6.1 Features

With the intelligent module monitor, you can use dedicated screens to monitor the buffer memory of the intelligent function module and make changes to the data. In addition, you can monitor the signal statuses of the I/O modules. The features of the intelligent module monitor are described below.

1 Realized monitoring with dedicated screens

You can monitor the intelligent function module(s) and I/O module(s) and make changes to the data using dedicated screens.

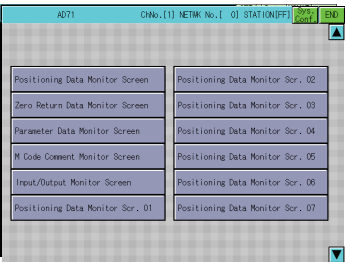
There is no need to create screens for monitoring or data changes, thereby reducing the drawing workload.

- For intelligent function module

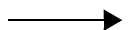
As a menu of monitor items is displayed, select an item from the menu, and the corresponding monitor screen is then displayed.

Details of the buffer memory and the I/O signal statuses between the buffer memory and the PLC CPU are displayed in text, numerical values, and graphs on the monitor screens.

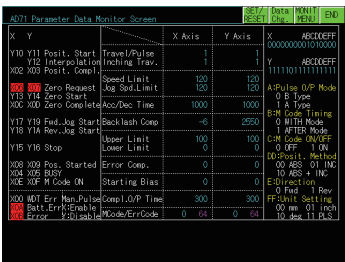
Select a monitor from the menu



Select a menu



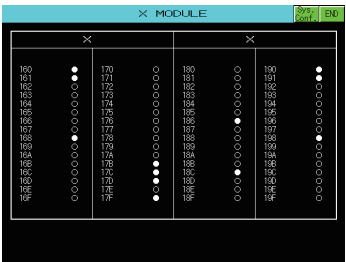
Monitor screen



- For I/O module

The status of I/O signals to and from an external module is monitored.

Monitor screen

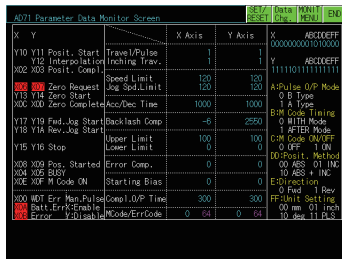


2 Enabled data change by write operations

The values are written into the buffer memory of the intelligent function module by writing values from the monitor screen.

(Writing example)

Monitor screen



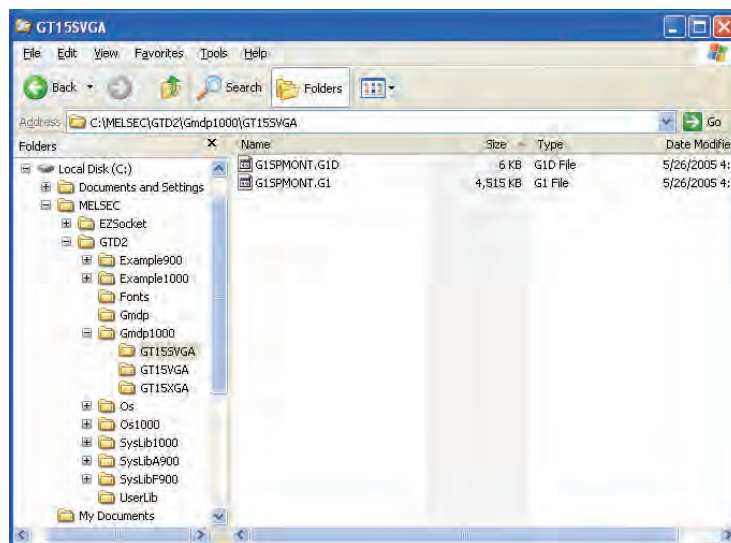
When changing a change-permitted channel



3 Enabled project data reusing for the intelligent module monitor

Intelligent module monitor data is saved in the following directory in a personal computer with GT Designer2 installed. (Saved as a G1 file)

Because the following data can be edited with GT Designer2, you can use part of the data for project data. (It is recommended that you copy the data to prevent accidental deletion of the data.)



6.2 Specifications

6.2.1 System configuration

This section describes the system configuration of the intelligent module monitor.
For connection type settings and precautions regarding the communication unit/cable and connection type, see the following manual.

 GOT1000 Series Connection Manual

1 Targeted equipments for the intelligent module monitor

(1) PLC CPU

PLC
QCPU (Q mode)
QSCPU
QnACPU* ¹
ACPU/QCPU (A mode)

*1: You cannot use Q4ARCPU.

(2) Intelligent module

For QCPU (A mode), QnACPU, and ACPU		For QCPU (Q mode)	
A62DA-S1,	A68AD,	Q64AD,	Q68ADV,
A68ADN,	A68RD,	Q68ADI,	QD62,
A84AD,	A616AD,	Q64DA,	Q62DA,
A616TD,	A616DAV,	QD62D,	QD62E,
A616DAI,	A61LS,	QD75D,	QD75P,
A62LS,	AD61,	QD75MH,	QD75M,
AD70,	AD70D,	Output module,	Input module,
AD71,	AD72,		
A1SD71,	A1SD61,		
A1S64AD,	A1S62DA,		
A1SD70,	A1S62RD,		
A1SJ71PT32-S3,	A1S63ADA,		
AJ71PT32-S3,	AD75P* ¹ ,		
A1SD75P* ² ,	AJ71ID1-R4,		
AJ71ID2-R4	A1SJ71ID1-R4,		
A1SJ71ID2-R4,	A1S68DAV,		
A1S68DAI,	A1S68AD,		
A1S64TCTT(BW)-S1,	A1S64TCRT(BW)-S1		
Input module,	Output module,		

*1: AD75M1 (M2/M3) can be monitored in the range of AD75P1 (P2/P3).

*2: A1SD75M1 (M2/M3) can be monitored in the range of A1SD75P1 (P2/P3).

You can use the system monitor [BM MONITOR] to monitor intelligent function modules other than those listed above.

2 Connection type

(○: Available, ×: Unavailable)

Function		Connection type between GOT and PLC CPU							
Name	Description	Bus connection *5	Direct CPU connection *5	Computer link connection *5	Ethernet connection	MELSEC NET/H connection, MELSEC NET/10 connection	CC-Link IE ^{*2}	CC-Link connection	
								ID ^{*3*5}	G4 ^{*4*5}
Intelligent module monitor	Monitors buffer memory of intelligent function module and signal statuses of I/O modules	○	○	○	○	△ ^{*1}	○	○	○

*1 For the MELSECNET/10 connection, use a QCPU and network module (QJ71LP21, QJ71LP21-25, QJ71LP21S-25, and QJ71BR11) with the function version B or later.

*2 Indicates the CC-Link IE controller network connection.

*3 Indicates CC-Link connection (Intelligent device station).

*4 Indicates CC-Link connection (via G4).

*5 The QSCPU does not support the connection type.

3 Required option OS and option function board

The option OS and option function board shown below are required.

Option OS	OS memory space (user area)			Option function board	
	GT16		GT15	GT16	GT15
	Built-in flash memory (ROM)	User memory (RAM)			
Intelligent module monitor	390KB	770KB	384KB	Not required	GT15-FNB, GT15-QFNB16M, GT15-QFNB48M, GT15-QFNB, GT15-QFNB32M, GT15-MESB48M

(1) Option OS

Install the option OS in the above table to the GOT.

Refer to the following manual for the procedure for installing the option OS.

 GT Designer2 Version □ Basic Operation/Data Transfer Manual (8. TRANSFERRING DATA)

(2) OS memory space

The available memory space shown in the table above is required in the user area to install the option OS to the GOT.

Refer to the following manual for the procedure for checking the available memory space of the user area and information about the data using other user areas.

 GT Designer2 Version □ Basic Operation/Data Transfer Manual (8. TRANSFERRING DATA)

(3) Option function board

(a) For GT16


No option function board is required.

(b) For GT15

Mount one of the option function boards in the above table on the GOT.
For the GOTs with a built-in option function board, refer to the following.

 1.1.2 Hardware and OS¹ required for each function

For how to mount an option function board on the GOT, refer to the following manual.

 GT15 User's Manual (8.10 Option Function Board)

4 Required memory space for use of the intelligent module monitor

The memory space of the intelligent module monitor data is indicated below.

The memory space required for storing data into the internal memory of the GOT is the same as the memory space required for storing data into the hard disk of a personal computer.

For QCPU (A mode), QnACPU, and ACPU			For QCPU (Q mode)		
Stored screen data		Memory space (KB)	Stored screen data		Memory space (KB)
Intelligent module monitor data common information		21.0	Intelligent module monitor data common information		13.4
1 to 2	"A62DA-S1"	7.2	400 to 402	"Q68ADV/Q68ADI/Q64AD"	19.7
3 to 5	"A68AD"	11.0	403 to 405	"Q62DA/Q64DA"	14.1
6 to 8	"A68ADN"	17.4	406 to 407	"QD62D/QD62E/QD62"	17.7
9 to 11	"A68RD"	19.0	408 to 430	"QD75P/QD75D"	572.8
12 to 15	"A84AD"	21.8	431 to 467	"QD75M"	454
16 to 34	"A616AD"	136.6	1001 to 1031	"QD75MH"	427.3
35 to 62	"A616TD"	254.1	Input module		0.0
63 to 65	"A616DAV"	18.1 ^{*3}	Output module		0.0
66 to 68	"A616DAI"	17.6 ^{*3}	-	-	-
69 to 70	"A61LS"	15.6	-	-	-
71 to 75	"A62LS"	79.0	-	-	-
76	"AD61"	8.4	-	-	-
77 to 79	"AD70"	22.2	-	-	-
80 to 83	"AD70D"	31.9	-	-	-
84 to 108	"AD71"	662.5	-	-	-
109 to 133	"AD72 (A1SD71)"	665.5	-	-	-
134 to 139	"AJ71PT32-S3"	47.2	-	-	-
146 to 150	"A1SD61"	40.8	-	-	-
151 to 153	"A1S64AD"	13.8	-	-	-
154	"A1S62DA"	5.6	-	-	-
155 to 157	"A1SD70"	22.9	-	-	-
158 to 160	"A1S62RD"	13.3	-	-	-
161 to 166	"A1SJ71PT32-S3"	46.9	-	-	-
167 to 169	"A1S63ADA"	18.1	-	-	-
170 to 206	"AD75P ^{*1} "	621.7	-	-	-
207 to 210	"AJ71ID ^{*2} "	43.8	-	-	-
211 to 213	"A1S68DAV"	13.3 ^{*3}	-	-	-
214 to 216	"A1S68DAI"	13.2 ^{*3}	-	-	-
217 to 219	"A1S68AD"	10.6	-	-	-
220 to 225	"A1S64TCTT/RT-S1"	52.7	-	-	-
Input module		0.0	-	-	-
Output module		0.0	-	-	-

*1 Use the screen for AD75P to monitor A1SD75P.

*2 Use the screen for AJ71ID to monitor A1SJ71ID.

*3 Downloading any of these enables monitoring both intelligent function modules.

6.2.2 Access range

1 When using bus connection/direct CPU connection/computer link connection

- The intelligent module monitor can monitor intelligent function modules on the bases of the connected station and other stations.
- The intelligent module monitor can only monitor systems of the following combinations when computer link connection is applied.

PLC CPU used	Computer link/serial communication module used ^{*1}
QCPU (Q mode)	QJ71C24
QCPU (A mode)	A1SJ71UC24
QnACPU	AJ71QC24, A1SJ71QC24
ACPU	AJ71UC24, A1SJ71UC24 AJ71C24-S8, A1SJ71C24, A1SCPUC24-R2, A2CCPUC24


^{*1} For details of module names, refer to the GOT1000 Series Connection Manual.

- The following restrictions apply when monitoring other stations of MELSECNET/II data link systems. Only the host and master stations can be monitored when the connected station is a local station. Regardless of the type of connected station, no stations other than ACPUs can be monitored.
- When connected to a remote I/O station on the MELSECNET/H network system, the remote I/O station on the MELSECNET/H network system is displayed as QCPU in the system configuration display of the intelligent module monitor.
- A diagnosis of the remote I/O station on the MELSECNET/H network system is not performed.
- Intelligent function modules on the base of remote I/O stations other than those on the MELSECNET/H network system are not monitored.

2 When using MELSECNET/H, MELSECNET/10, or CC-Link IE controller network connection


- The intelligent module monitor can monitor intelligent function modules on the bases of the control station and normal stations.
- To monitor another network, routing parameters have to be set to the GOT side and PLC side. (Only with the MELSECNET/H communication unit or CC-Link IE controller network communication unit) For routing parameter setting, refer to the following manuals.

Routing parameter setting for the GOT

 GOT1000 Series Connection Manual (6.2 Preparatory Procedures for Monitoring)

Routing parameter setting for PLC CPU

For MELSECNET/H communication unit

 Q Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

For CC-Link IE controller network communication unit

 CC-Link IE Controller Network Reference Manual

3 When using CC-Link connection (Intelligent device station/via G4)

- The intelligent module monitor can monitor intelligent function modules on the bases of the master station and local stations.

4 When using Ethernet connection

- The intelligent module monitor can monitor the intelligent function module on the base of the PLC CPU assigned the IP address.
(The station assigned in the Ethernet setting of GT Designer2 can be monitored.)
- To monitor another network, routing parameters have to be set to the GOT side and PLC side.
For routing parameter setting, refer to the following manuals.



GOT1000 Series Connection Manual (6.2 Preparatory Procedures for Monitoring)

Routing parameter setting for PLC CPU



Q Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

5 When the intelligent module monitor monitors the master station of the MELSECNET/II network on which any remote I/O station exists

- Be sure to assign I/O when the master station is AnN or AnACPU.
If I/O is not assigned, the system configuration of the intelligent module monitor will not be displayed correctly.
- Intelligent function modules on the base of remote I/O stations are not monitored.

6 With Universal model QCPU

With Universal model QCPU, the GOT can monitor up to 64 stations.

6.2.3 Precautions

1 GOT to be used

The intelligent module monitor function cannot be used with the GT1555-Q and GT1550-Q.

2 Special function modules that cannot be monitored

Modules displayed as "SP" on the System Configuration screen cannot be monitored using the intelligent module monitor.

To monitor these modules, use the system monitor function [BM MONITOR].

3 Display when connecting the small building-block type CPU

This precaution pertains to a situation where an extension base unit for a large building block type is connected to a small building-block type CPU (such as the A1SCPU) in the station connected to the GOT.

In this case, the intelligent function module on the large extension base unit is displayed on the System Configuration screen with the model name of the same type of the small building-block type intelligent function module.

If there is no small building-block type intelligent function module, "SP" is displayed and the object module cannot be monitored.

(Example)

Installed module	Model name displayed
AD72	→ A1SD71
AJ71ID	→ A1SJ71ID
AJ71PT32-S3	→ A1SJ71PT32-S3
AD75P	→ A1SD75P
A68ADN [CH1 to CH8]	→ A1S64AD [CH1 to CH4]
A68RD [CH1 to CH8]	→ A1S62RD [CH1 to CH2]

4 Monitoring intelligent function modules with restrictions

(1) When monitoring AD71 (S1, S2, S7)

When the previous slot of the AD71 module is an empty slot, monitoring is performed in the following way.

- (a) The AD71 is treated as the AD72, and "AD72" is displayed on the System Configuration screen.

In this case, select "AD72" that corresponds to the actual installed position.

- (b) The monitor screen that displays as shown (a) above is a screen for the AD72.

The number obtained by subtracting 10_H from the I/O signal number on the display is the number for when installing the AD71 in slot 0.

* To prevent the AD71 from being treated as the AD72, execute "Shift the installation position of AD71 forward" or "In the I/O assignments, assign 16 points to the previous empty slot of the AD71".

- (2) When monitoring the A68AD, A68ADN, or A68RD used with a small building-block type PLC CPU
The GOT recognizes the intelligent function module installed in a large building-block type extension base unit connected to a small building-block type PLC CPU (e.g. A1SCPU) as a small building-block type intelligent function module to monitor it.

Hence, there are the following precautions for the A68AD, A68ADN, and A68RD.

Intelligent function module	Precautions
A68AD	The A68AD cannot be displayed correctly because the buffer memory configuration differs between the A68AD and A1S68AD.
A68ADN	Among CH1 to CH8 of the A68ADN, CH5 to CH8 cannot be displayed because the A1S64AD has only CH1 to CH4.
A68RD	Among CH1 to CH8 of the A68RD, CH3 to CH8 cannot be displayed because the A1S62RD has only CH1 to CH2.

The above intelligent function modules can be monitored properly if they are installed in a base unit connected to a large building block type PLC CPU (e.g. AnUCPU).

- (3) When monitoring the A1SD75M, AD75M
Displayed as A1SD75P or AD75P when the A1SD75M or AD75M is installed.
The A1SD75M or AD75M can be monitored within the monitoring range of the A1SD75P or AD75P.
- (4) When monitoring the A81CPU
The A81CPU is monitored in the following way.

Item	64 points in first half	64 points in last half
Treatment of A81CPU	Treated as a module that cannot be monitored.	Treated as an input module.
System Configuration screen	Displays "Special X, Y []"	Displays "Input 64 X []"
Monitoring	Disabled	Enabled as inputs

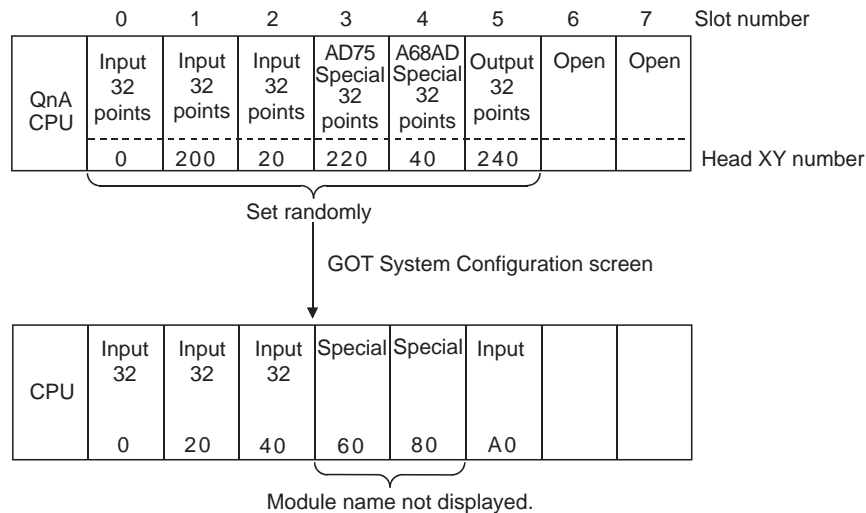
- (5) When monitoring an I/O module
- (a) Only the output signal can be monitored for an I/O module for which "Output []" is displayed on the System Configuration screen.
For input signals, monitor X of the PLC CPU device with the system monitor function.

5 Editing and reusing intelligent module monitor data

The project data for the intelligent module monitor cannot be edited by modifying or adding an object. However, the data can be used on a user-created monitor screen.

6 Precautions for I/O allocation setting

- (1) Even when I/O numbers are set at random as shown below, in the case the GOT is connected to the QnACPU, the start XY numbers are displayed in order on the System Configuration screen. When performing intelligent module monitoring, always perform the I/O allocation in order from slot 0.



- (2) If the slot assigned with outputs in I/O assignment is not fitted with a module, the GOT displays it as input. (Common to ACPU and QnACPU)

7 Display provided when the QA1S6 □ extension base unit is used with the QCPU (Q mode)

This precaution pertains to a situation where the QA1S6 □ extension base unit is connected to the QCPU (Q mode) in a station connected to the GOT.

In this case, the abbreviated format is displayed for the following intelligent function modules on the System Configuration screen.

You can use the unit detail information to check the full format of the module displayed with the abbreviated format.

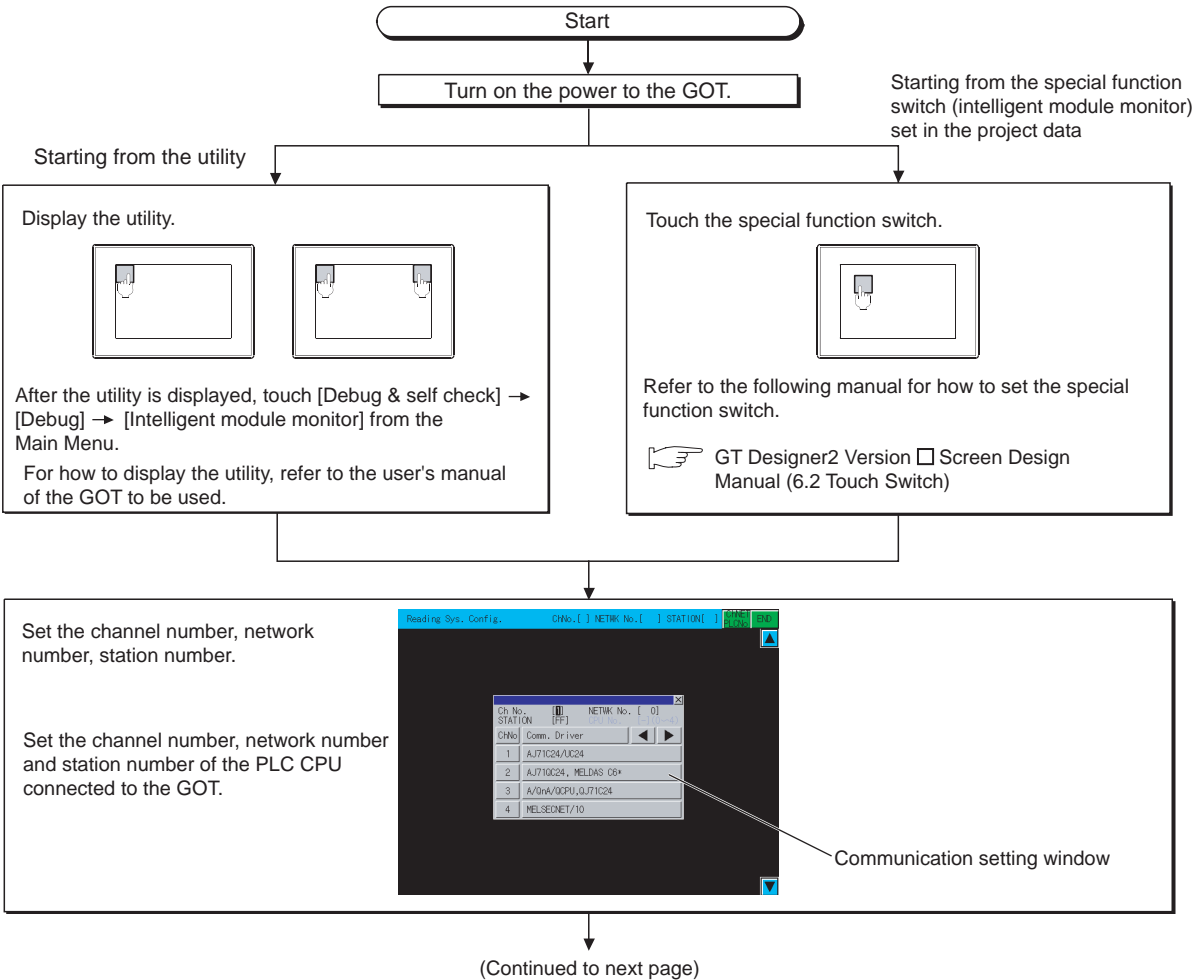
Unsupported intelligent function modules are displayed as "SP", and the corresponding modules cannot be monitored.

Installed module	Model name displayed
A1S63ADA	63ADA
A1SJ71PT32-S3	J71PT32-
A1SJ71ID1-R4	J71ID
A1SJ71ID2-R4-S1	
A1S64TCTT(BW)-S1	64TCTT/R
A1S64TCRT(BW)-S1	

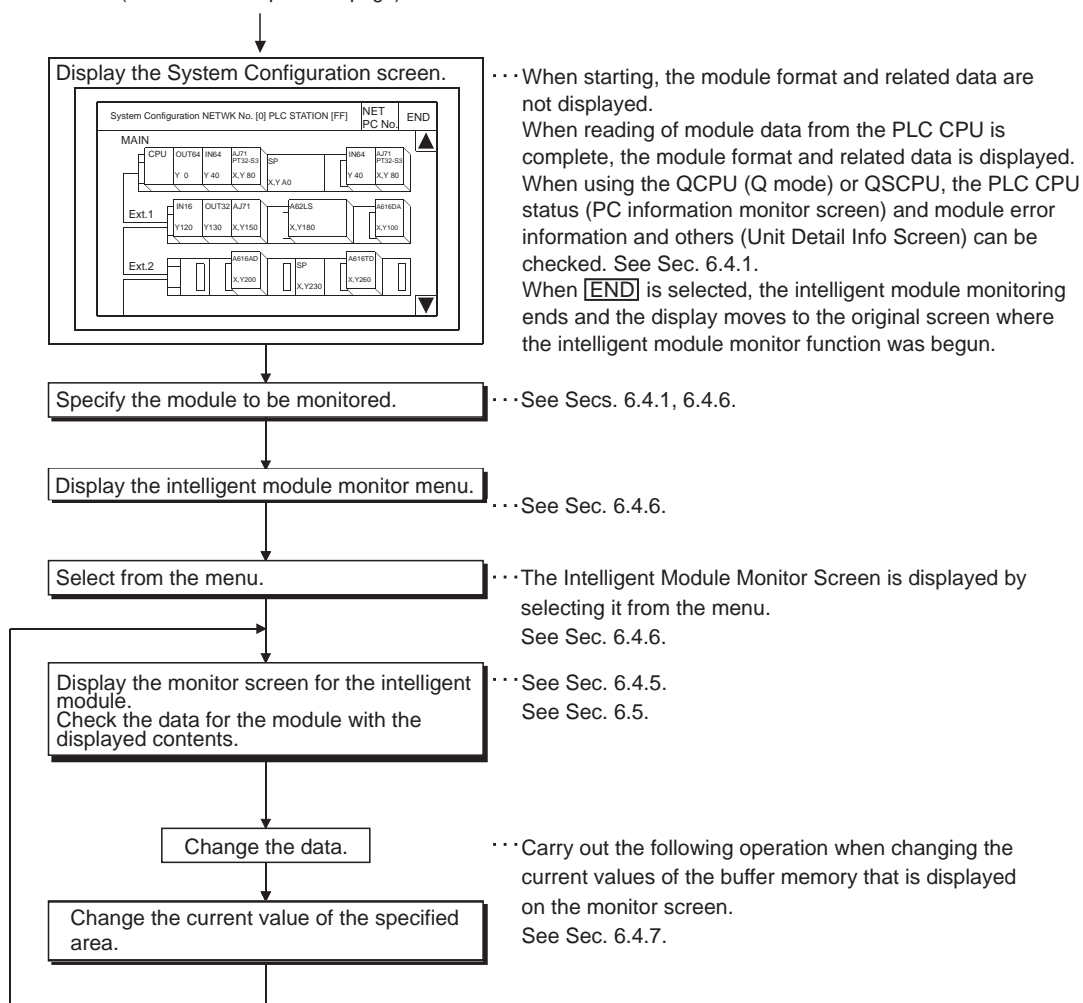
6.3 Display

1 Operation procedure until the start of the intelligent module monitor




This subsection describes the flow until the operation screen for the intelligent module monitor is displayed after the intelligent module monitor (Option OS) is installed in the GOT.



(Continued from previous page)

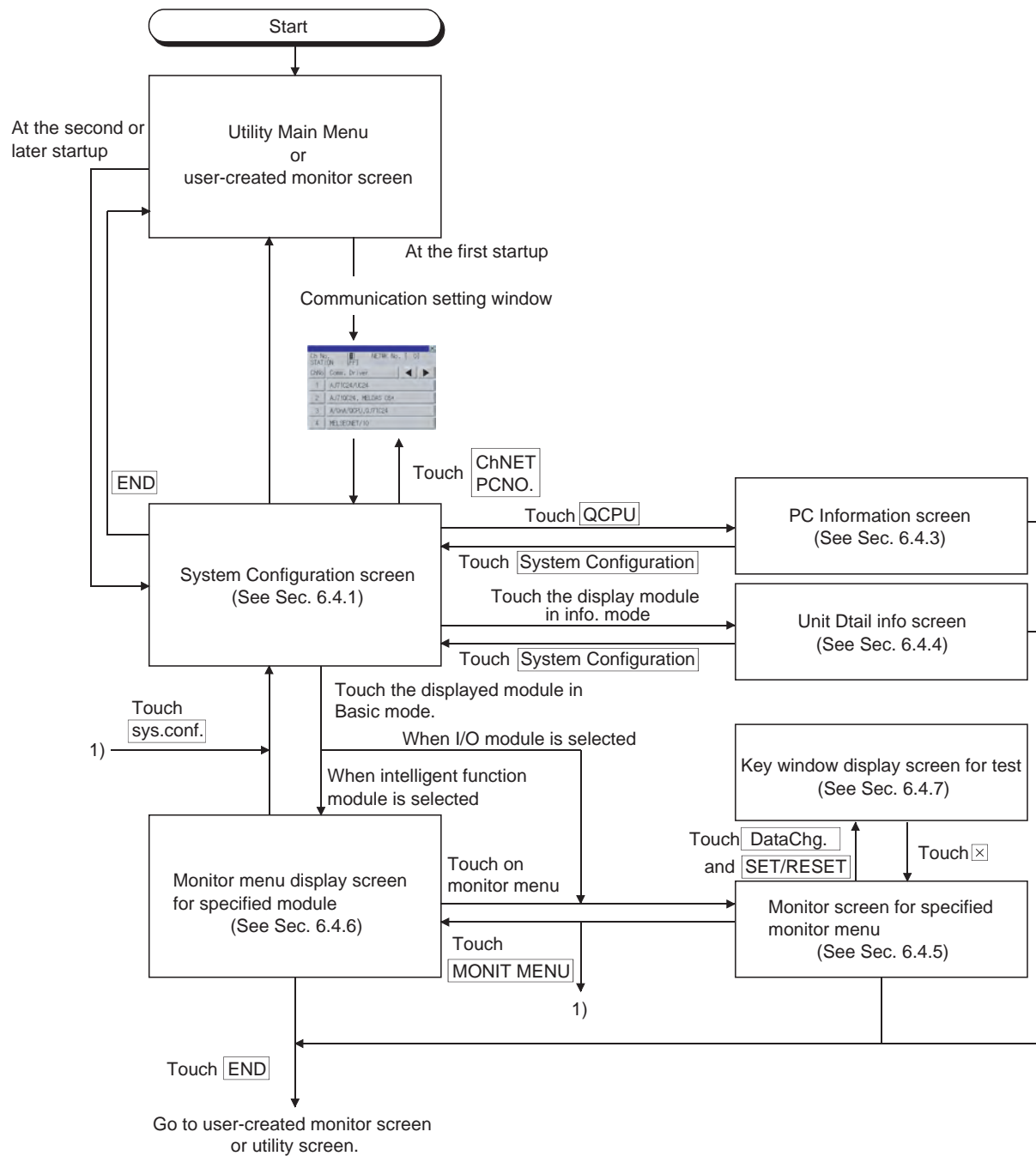




- (1) How to display the utility
For how to display the utility, refer to the following.
 -  GT16 User's manual (8.3 Utility Display)
GT15 User's manual (9.3 Utility Display)
- (2) Displaying communication setting window
After turning on the GOT, the communication setting window is displayed at the first startup of the intelligent module monitor only.
For displaying the communication setting window at the second or later startup, touch the  button on the intelligent module monitor screen.
 -  6.4 Operation of Each Intelligent Module Monitor Screen)
- (3) If the project data has not been downloaded
The intelligent module monitor can be started from the utility even if the project data has not been downloaded to the GOT.

2 Changing screens

The following describes how to change the screen.



6.4 Operation of Each Intelligent Module Monitor Screen

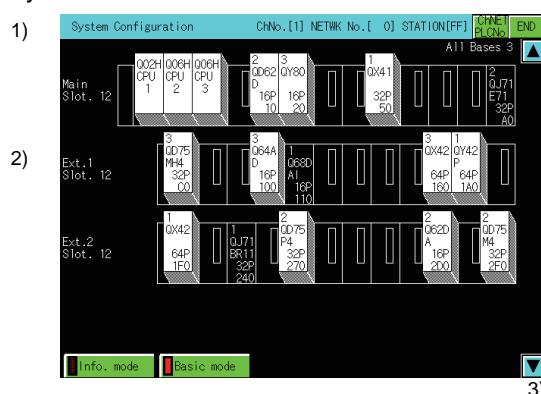
This section describes the operations of the screens when using the intelligent module monitor.

6.4.1 Composition of the system configuration screen and key functions

This section describes the configuration of the System Configuration screen that is displayed after startup of the intelligent module monitor and the functions of the keys displayed on the screen.

1 When using the QCPU (Q mode) or QSCPU

(1) Displayed contents



The model name of the module and related data are displayed at the end of the module data readout from the PLC CPU.

(The OS executes it automatically.)

When connected to the MELSECNET/H or MELSECNET/10, the screen in Section 6.4.2 is displayed.

Item	Description
1)	Displays the network number and station number of the monitored station.
2)	Displays the model name, I/O points, and start I/O number for the modules installed in the monitored station. For an intelligent function module that cannot be monitored, the model name is displayed as "SP". The display position of the module becomes the key to switch to the screen where the monitoring of that module is performed. (Touch input) Displays the CPU Nos. for the CPUs and the control CPU number for the installed modules when there are multiple CPU systems.
3)	Display keys used for the operations on the System Configuration screen shown in (2). (Touch input)

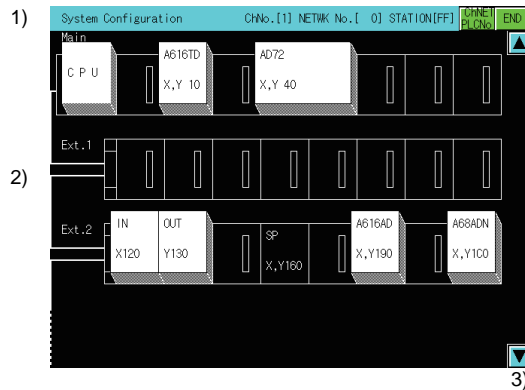
(2) Key functions

The table below shows the functions of the keys that are used with the operation on the DEVICE MONITOR screen.

Key	Function
END	Closes the monitoring and returns the screen to the one for starting the intelligent module monitor.
ONE FLOW	Displays the communication setting window.
QCPU	The screen switches to the PC Information monitor screen. (Refer to Section 6.4.3.)
Module display position	In intelligent module monitor mode: Switches to the screen where the intelligent module monitoring for that module is performed. In unit detail info mode: Switches to the screen displaying detailed information of the selected module.
Info. mode	Switches the System Configuration screen to Info. mode. (Refer to Section 6.4.4.)
Basic mode	Switches the System Configuration screen to Basic mode.
▲ ▼	Scrolls the display one stage up or down to display the system configuration of the currently undisplayed stage immediately before/after the currently displayed stage. Operations can be performed when the system configuration has three or more extension bases. ▲ : Scrolls one stage up. ▼ : Scrolls one stage down.

2 When using the QCPU (A mode), QnACPU, and ACPU

(1) Displayed contents



Item	Description
1)	Displays the network number and station number of the monitored station.
2)	For modules installed in the monitored station, the model name and start No. of I/O signals are displayed for the intelligent function module, "IN"/"OUT" and the I/O points for the I/O module. For an intelligent function module that cannot be monitored, "SP" and the start No. of the I/O signal are displayed. The display position of the module becomes the key to switch to the screen where the monitoring of that module is performed. (Touch input)
3)	Display keys used for the operation on the System Configuration screen shown in (2). (Touch input)

(2) Key functions

The table below shows the functions of the keys that are used for the operation on the System Configuration screen.

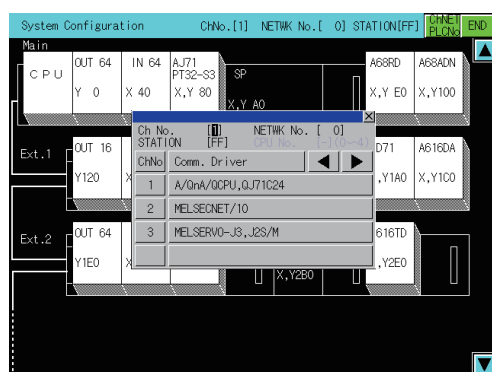
Key	Function
	Closes the monitoring and returns the screen to the one for starting the intelligent module monitor.
	Displays the communication setting window.
Module display position	Switches to the screen where the intelligent module monitoring for that module is performed.
	Scrolls the display one stage up or down to display the system configuration of the currently undisplayed stage immediately before/after the currently displayed stage. Operations can be performed when the system configuration has three or more extension bases. : Scrolls one stage up. : Scrolls one stage down.

6.4.2 Setting method for other station monitoring

The setting method to perform other station monitoring during intelligent module monitoring is described below.

<Intelligent module monitor>

When using MELSECNET/10 connection



Touch [Intelligent module monitor] to display the System Configuration screen.

Depending on the connection method, the screen that is first displayed different, as indicated below.

Bus connection and direct CPU connection	The base of the connected station is displayed.
Ethernet connection	The base of the station set as the host is displayed.
CC-Link connection (via G4)	The base of the master station is displayed.
MELSECNET/H connection, MELSECNET/10 connection CC-Link IE controller network connection CC-Link connection (Intelligent device station)	No system configuration display

The following operations are always required for MELSECNET/H, MELSECNET/10 and CC-Link connections.

- 1) Touch to display the window shown in 2).
- 2) Touch to switch to the window for network setup.
(To monitor another channel number or other station, touch the channel number you want to monitor and switch to the network setup window.)
Touch an alphanumeric key to specify the network number and PLC station number.

Alphanumeric key ... Enters the network number and PLC station number.

..... Selects the input area.

..... Sets the area value.

For data link system

NETWK No. : 0
Station No. : FF (Host)
 : 0 (Master station)
 : 1 to 64 (Local station)

For network system^{*2}

NETWK No. : 0 (Host loop)
 : 1 to 255 (Specified loop)
Station No. : FF (Host)
 : 0 (Control station number)
 : 1 to 64: (Control station/normal station)

For Ethernet connection^{*1}

NETWK No. : 1 to 239
Station No. : 1 to 64

For CC-Link system

NETWK No. : 0
Station No. : 0 (Master station)

^{*1} You need to set a monitor target using GT Designer2 in advance.

For ACPU monitoring, specify the network number/station number set using GT Designer2.
Refer to the following for details of the monitor target setting for Ethernet connection.

GOT1000 Series Connection Manual (10. ETHERNET CONNECTION)

^{*2} When the station No. is set to the host station (FF), set the network No. to 0.

When the setting is finished, the system configuration of the specified station is displayed.

Refer to Section 6.4.6 for further operations.

6.4.3 Composition of PC Information monitor screen and key functions

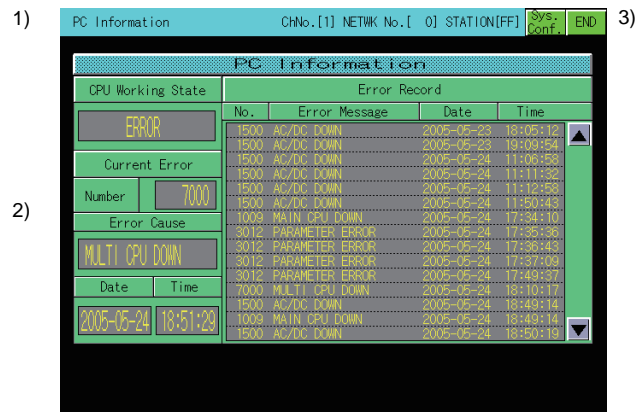
This section describes the structure of the PC Information monitor screen that is displayed by specifying the QCPU (Q mode) or QSCPU on the System Configuration screen, and the key functions displayed on the screen.

The GOT displays the PC Information monitor screen only when using the following controllers.

- QCPU (Q mode)
- QSCPU

1 When using the QCPU (Q mode)

(1) Displayed contents



Item	Description
1)	Displays the network number and station number of the monitored station.
2)	Displays the operating status, error information and other information of the targeted PLC CPU. Up to 100 error information events can be displayed.
3)	Displays keys used for the operations on the PC Information monitor screen shown in 2. (Touch input)

(2) Key functions

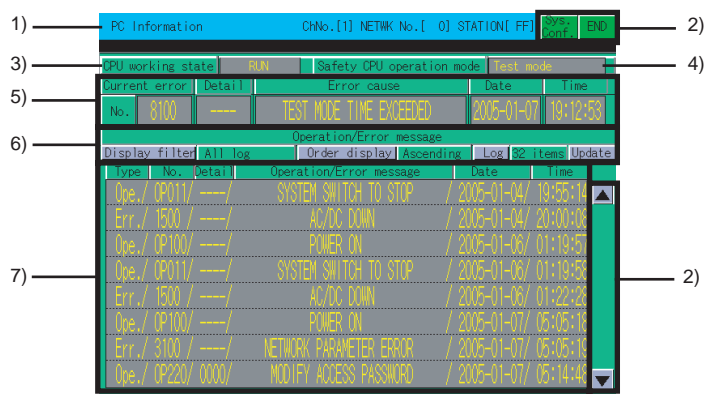
The table below shows the functions of the keys that are used for the operation on the System Configuration screen.

Key	Function
END	Closes the monitoring and returns the screen to the one for starting the intelligent module monitor.
Sys. Conf.	Switches the screen to the System Configuration screen. (Refer to Section 6.4.1.)
▲ ▼	Scrolls the display one page up or down. ▲ : Scrolls one page up. ▼ : Scrolls one page down.

2 When using the QSCPU

(1) PC Information monitor screen








(a) Displayed contents



Item	Description
1)	Displays the channel number, network number, and station number of the monitored station.
2)	Displays the keys that are used for the operation on the System Configuration screen shown in (b).
3)	Displays the QSCPU operation status. (RUN/STOP)
4)	Displays the safety CPU operation mode. (Safety mode/Test mode)
5)	<p>Displays the error being occurred.</p> <p>Touching the error displays the Error details screen. (This section 2 (3))</p> <p>No. : Displays the error code.</p> <p>Detail : Displays the detail code of the error log. ([---] is displayed when no detail code exists.)</p> <p>Error cause : Displays the error details. Touching the item displays the Error details screen.</p> <p>Date, Time : Displays the date and the time that the error occurs.</p>
6)	Set the items to be displayed in the log list. (This section 2 (1)(b))
7)	<p>Displays the operation status, error information, and others of the monitored PLC CPU. (Log list)</p> <p>Type : Displays the log types. (Ope: Operation log, Err: Error log)</p> <p>No. : Displays the operation codes or error codes.</p> <p>Detail : Displays the 4-digit detail codes of the operation logs or the error logs for the errors occurred in the CC-Link Safety system remote I/O module. ([---] is displayed when no detail code exists.)</p> <p>Operation/Error message : Displays the operation details or error messages. Displays "BROKEN OPERATION/ERROR LOG" when the log data is damaged.</p> <p>Date, Time : Displays the dates and the time of operations or the dates and time that errors occur.</p> <p>Touching an operation log displays the Operation details screen. (This section 2 (2))</p> <p>Touching an error log displays the Error details screen. (This section 2 (3))</p>

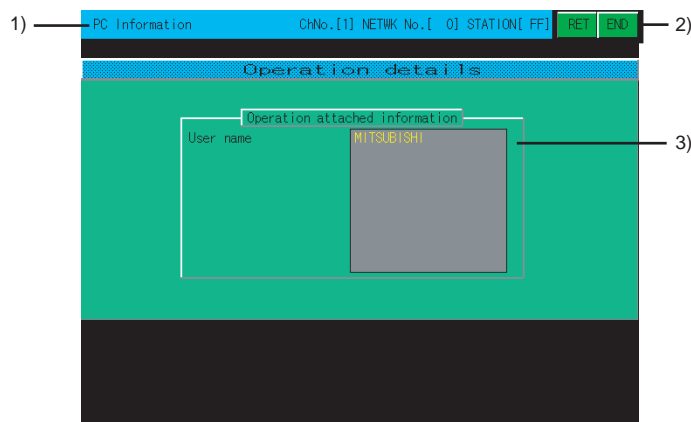
(b) Key functions

The table below shows the functions of the keys that are used for the operation on the System Configuration screen.

Key	Function
	Closes the monitoring and returns the screen to the one for starting the intelligent module monitor.
	Switches the screen to the System Configuration screen. (Refer to Section 6.4.1.)
	Switches the log types to be displayed in the log list. All log : Displays all the logs (error logs, operation logs). Error log : Displays the error logs only. Operation log : Displays the operation logs only.
	Sorts the log list in ascending or descending order.
	Switches the numbers of logs displayed in the log list. 32 items : Displays the latest 32 logs. 100 items : Displays the latest 100 logs. (When the number of displayed logs is switched from 100 to 32, 100 logs are displayed before touching the Update key.)
	Obtains the latest log information from the PLC CPU and updates the log list. (The displayed log data before touching the Update key is deleted.)
	Scrolls the display one page up or down. ▲ : Scrolls one page up. ▼ : Scrolls one page down.



(2) Operation details screen

(a) Displayed contents



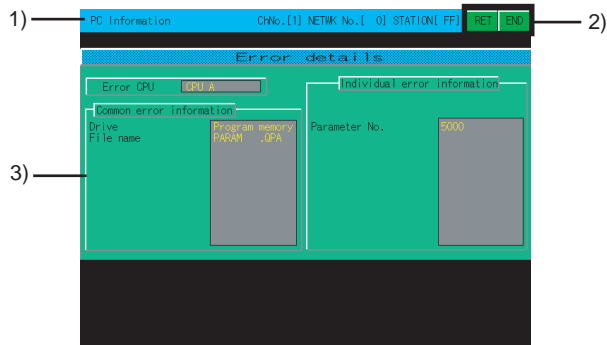
Item	Description
1)	Displays the channel number, network number, and station number of the monitored station.
2)	Displays the keys that are used for the operation on the System Configuration screen shown in (b).
3)	Displays the detailed operating information according to the operation log information stored in the QSCPU.

(b) Key functions

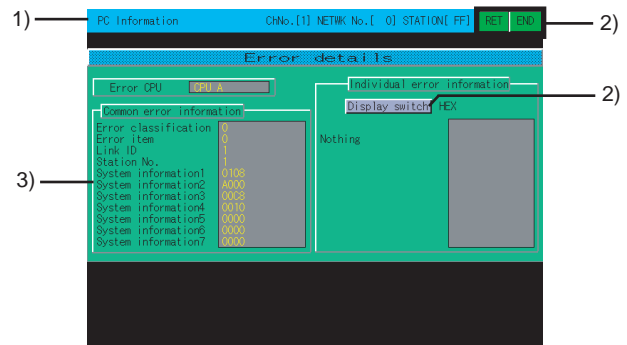
Key	Function
	Closes the monitoring and returns the screen to the one for starting the intelligent module monitor.
	Returns the screen to the PC Information monitor screen.

(3) Error details screen


(a) Displayed contents






(Example) Error details screen for safety CPU error



(Example) Displaying individual error information for safety remote I/O station

Item	Description
1)	Displays the channel number, network number, and station number of the monitored station.
2)	Displays the keys that are used for the operation on the System Configuration screen shown in (b).
3)	Displays the common error information and the individual error information according to the information stored in SD4 and subsequent devices of the QSCPU. For the common error information and the individual error information, refer to the following manual.  QSCPU User's Manual (Function Explanation, Program Fundamentals) When the individual error information for the safety remote I/O station is displayed, the numerical notation of the displayed data can be switched between decimal and hexadecimal numbers. (When the CC-Link Safety system master module cannot receive the error information from the safety remote I/O station, [****] is displayed for unreceived items.)

(b) Key functions

Key	Function
	Closes the monitoring and returns the screen to the one for starting the intelligent module monitor.
	Returns the screen to the PC Information monitor screen.
	Switches the numerical notation of the displayed data between decimal and hexadecimal numbers. (Only when the individual error information for the safety remote I/O station is displayed)

6.4.4 Composition of the unit detail info screen and key functions

This section describes the structure of the Unit Detail Info screen that is displayed by specifying a module on the System Configuration screen at Info. mode, and the key functions displayed on the screen. The GOT displays the Unit Detail Info screen only when using the following controllers.

- QCPU (Q mode)
- QSCPU

1 Displayed contents



Item	Description
1)	Displays the network number and station number of the monitored station.
2)	Displays the operating status, error information and other information of the targeted PLC CPU. Up to 10 error information events can be displayed.
3)	Displays keys used for the operations on the System Configuration screen shown in 2. (Touch input)

2 Key functions

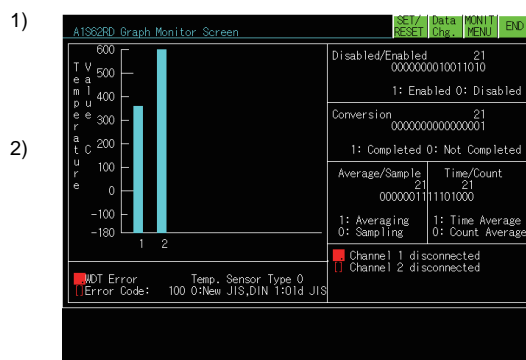
The table below shows the functions of keys that are used for the operations on the System Configuration screen.

Key	Function
END	Closes the monitoring and returns the screen to the one for starting the intelligent module monitor.
Sys. Conf.	Switches the screen to the System Configuration screen. (Refer to Section 6.4.1.)

6.4.5 Composition of the intelligent module monitor screen and key functions

This section describes the structure of the monitor screen that is displayed by specifying a module on the System Configuration screen (in Basic mode when the QCPU (Q mode) is used), and the key functions displayed on the screen.

1 Displayed contents (for A68RD)



3) All data are displayed when the readout from the intelligent function module is completed. (The OS executes it automatically.)

Item	Description
1)	Displays the model name of the module being monitored.
2)	Displays the buffer memory data of the module in its current form or in a graph. The status of I/O signals to and from PLC CPU is monitored. When testing, execute testing after moving the cursor to the display position of the target data.
3)	Displays keys used for the operations on the monitor screen shown in 2. (Touch input)

2 Key functions

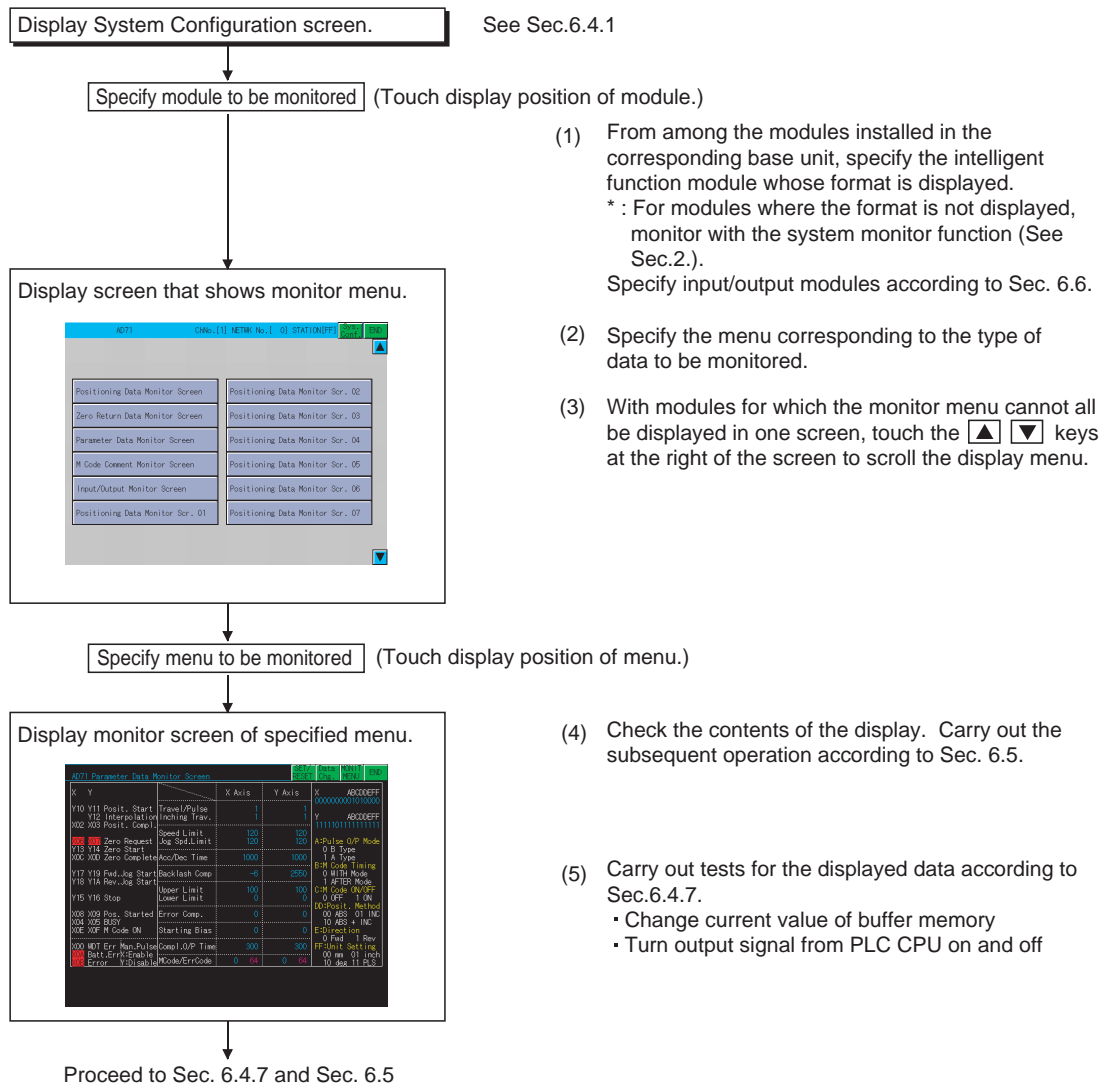
The table below shows the functions of keys that are used for the operations on the monitor screen.

Key	Function
END	Closes the monitoring and returns the screen to the one for starting the intelligent module monitor.
MONIT MENU	Closes the current monitor and returns to the screen displaying monitor menu. This operation can only be used when the intelligent function module has a monitor menu.
Data Chg.	Starts changing (writing) the current values of the buffer memory of the intelligent function module displayed on the screen.
SET/RESET	Starts testing (SET/RST) of the I/O signal between the PLC CPU and the intelligent function module.

6.4.6 Specifying a module to monitor and selecting monitor menu

This section uses the positioning module (AD71) as an example to describe the operations when starting the intelligent module monitor to monitor a desired module.

Operation procedure



6.4.7 Testing of the intelligent function module

! DANGER

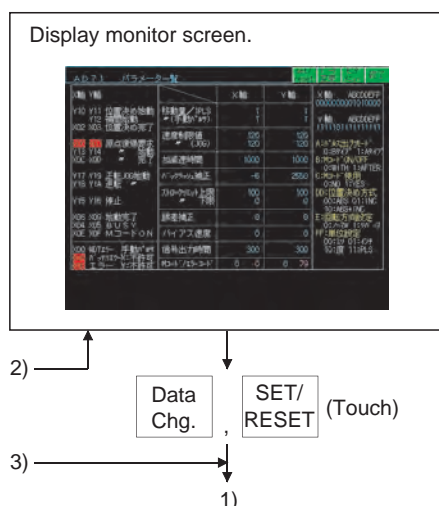
- When testing the operation (changing a current buffer memory value) of the intelligent module monitor, read this manual carefully to fully understand the operation.
For devices that perform significant operations for the system, never perform test operation to change data.
Doing so can cause accidents due to false outputs or malfunctions.

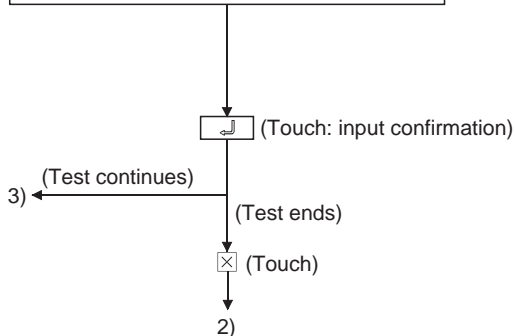
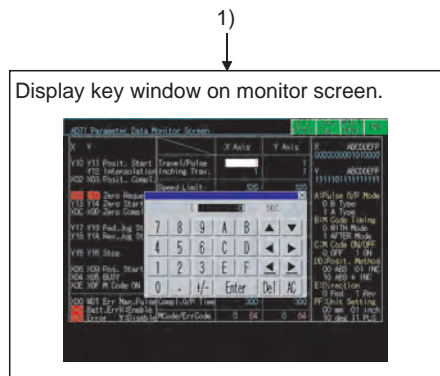
Testing can be performed for all buffer memory data displayed on the current monitor screen. This section describes the operations for changing the current value of the buffer memory and turning on and off the output signal from the PLC CPU to the intelligent function module.

Point


- Perform testing for the buffer memory that can be written from the PLC CPU and output signals that are output from the PLC CPU.
- It is recommended that testing be performed with the PLC CPU in STOP status. If the PLC CPU is tested during RUN status, the test monitor display returns to display values output from the sequence program and output statuses.





Operation procedure








When **Data Chg.** is touched (changes current value of buffer memory)

- All of the following operations can be carried out by touching the keys in the displayed key window.
- When you touch  at the upper left of the key window, the key window closes and the display returns to the monitor screen.

- (1) Move the cursor to the position where the data to be tested is displayed. (*1) ( : Up/down  : Left/right)
- (2) Use the numeric keys to specify the value to be changed. (*2)
The **DEL** key can be used to clear individual characters among those input.

When **SET/RESET** is touched (tests the I/O signal)

- All of the following operations can be carried out by touching the keys in the displayed key window.
- When you touch  at the upper left of the key window, the key window closes and the display returns to the monitor screen.

- (1) Use the alphabetic character keys to specify the name of the device to be tested, and then touch . (*1)
- (2) Use the numeric keys to specify the device number, and then touch .
- (3) Use the numeric keys to specify "Set" or "Reset".
0: OFF **1**: ON

*1 Do not perform the following tests.

If these tests are performed, the module may not operate correctly or the buffer memory/input signal may return to the output value/output status from the intelligent function module.

- 1) Testing of read-only buffer memory from the PLC CPU.
- 2) Testing of input signals from the intelligent function module to the PLC CPU.

*2 When testing buffer memory data, specify the change value in the following way.

- 1) For data where 16/32 bits are displayed with one number, specify a new value in decimal format.
- 2) For data where one number of 16/32 bits is displayed as a percent, such as with an A/D conversion module, specify a new value corresponding to the percentage in decimal format.

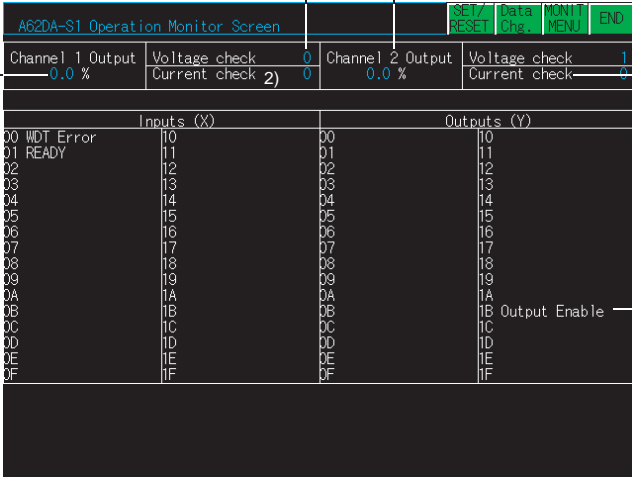
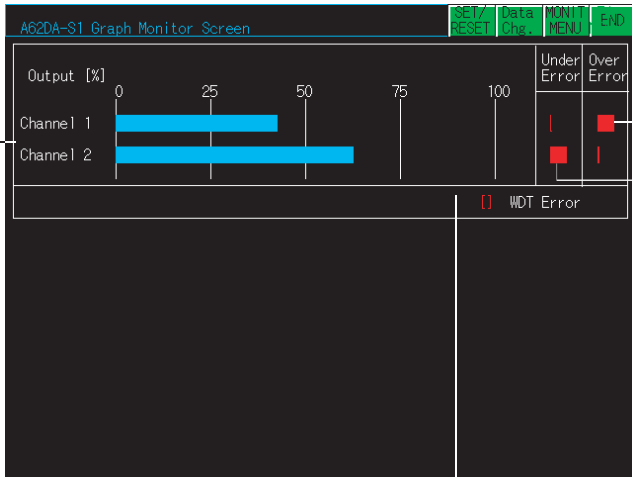
Example:

When the set value of the offset or gain is 0 to 2000 and you intend to change it to "50%", input "1000".

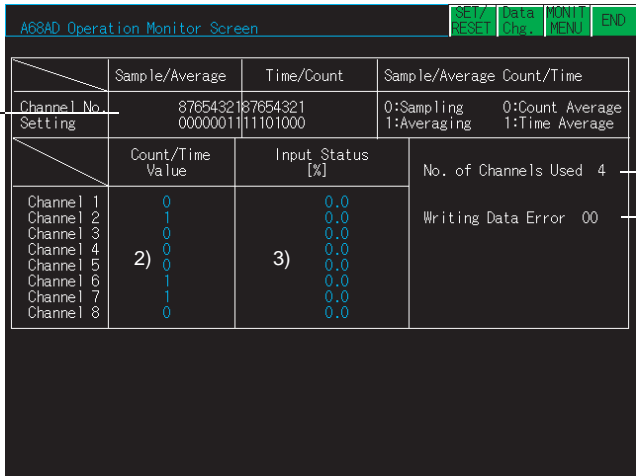
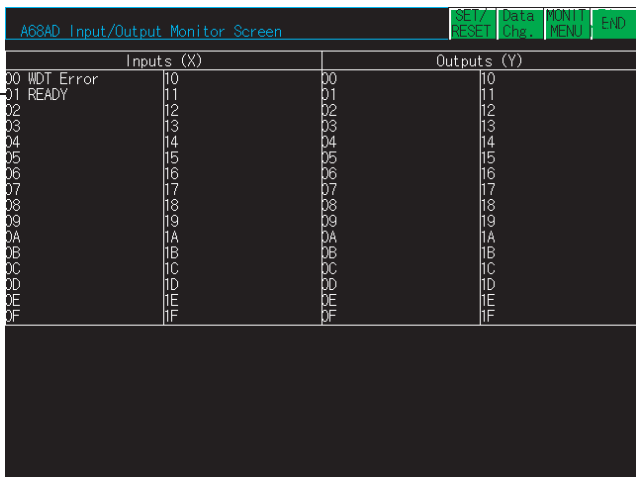
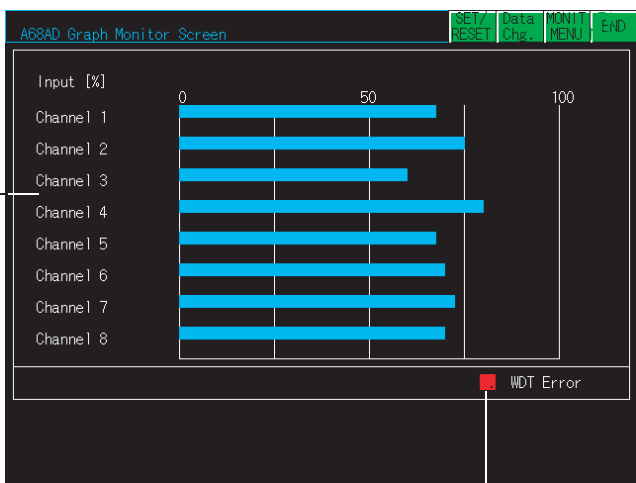
- 3) For data where 16 bits are displayed with "0" or "1" for each bit, specify a new value with changing the data to a decimal.

6.5 Intelligent Module Monitor Screens

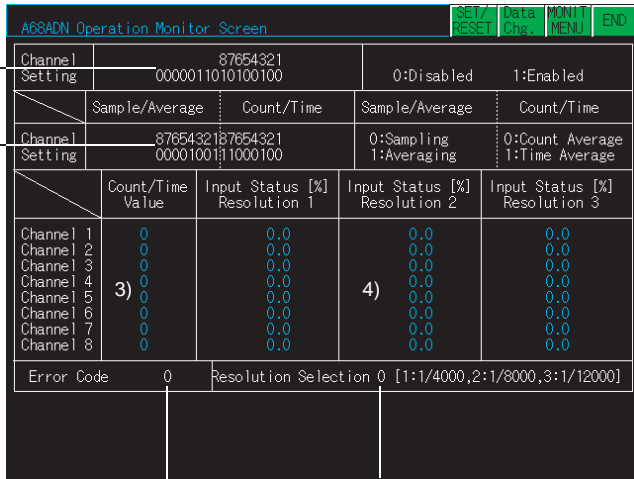
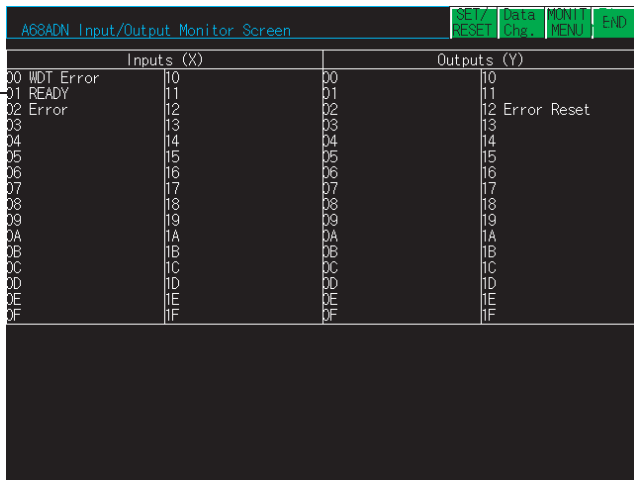
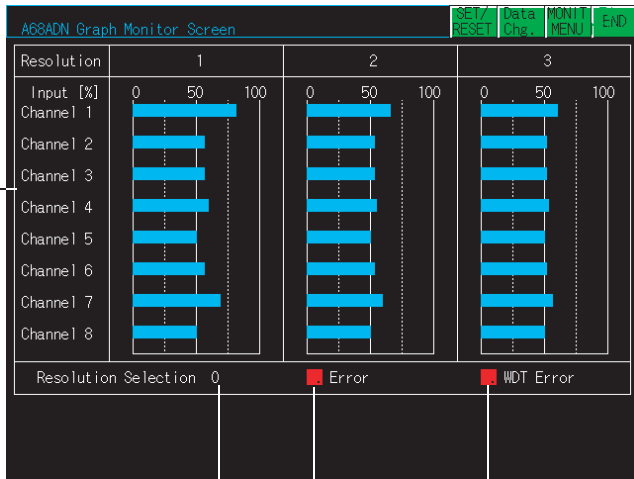
6.5.1 A62DA-S1 module monitoring

Screen example		No.	Buffer memory address	
			DEC	HEX
		1)	0, 1	0000, 0001
		2)	2 to 5	0002 to 0005
		3)	-	-
		-	-	-
		1)	0, 1	0000, 0001
		2)	2, 4	0002, 0004
		3)	3, 5	0003, 0005
		4)	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-

6.5.2 A68AD module monitoring

Screen example		No.	Buffer memory address	
			DEC	HEX
	1)	1)	1	0001
		2)	2 to 9	0002 to 0009
		3)	10 to 17	000A to 0011
		4)	0	0000
		5)	34	0022
		1)	-	-
			-	-
	1)	1)	10 to 17	000A to 0011
		2)	-	-
			-	-

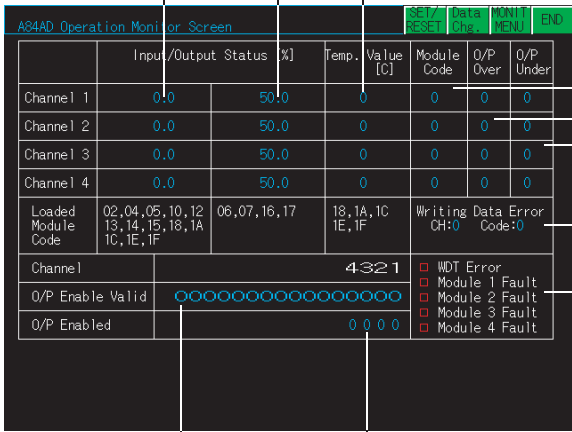
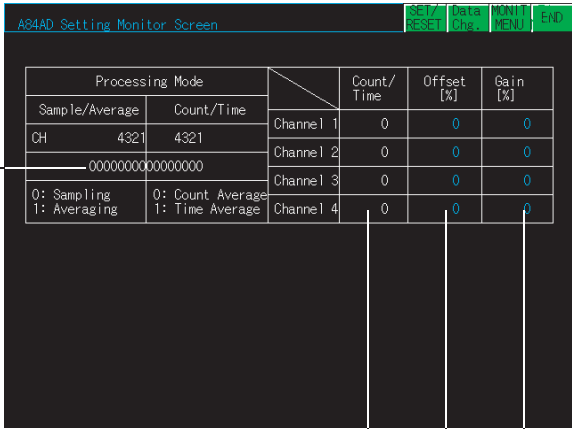
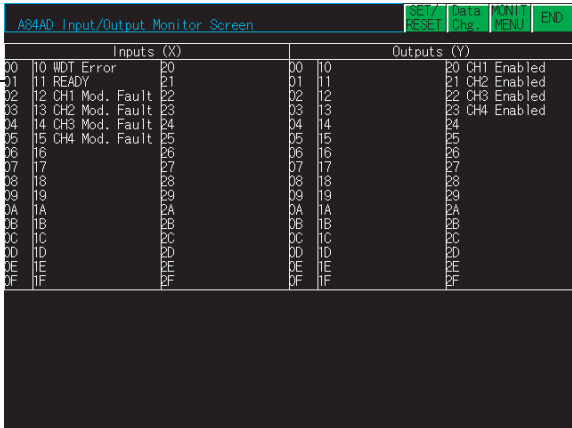
6.5.3 A68ADN module monitoring

Screen example		No.	Buffer memory address	
			DEC	HEX
		1)	0	0000
		2)	1	0001
		3)	2 to 9	0002 to 0009
		4)	10 to 17	000A to 0011
		5)	18	0012
		6)	20	0014
		-	-	-
5) 6)				
		1)	-	-
		-	-	-
		1)	10 to 17	000A to 0011
		2)	20	0014
		3)	-	-
		4)	-	-
		-	-	-

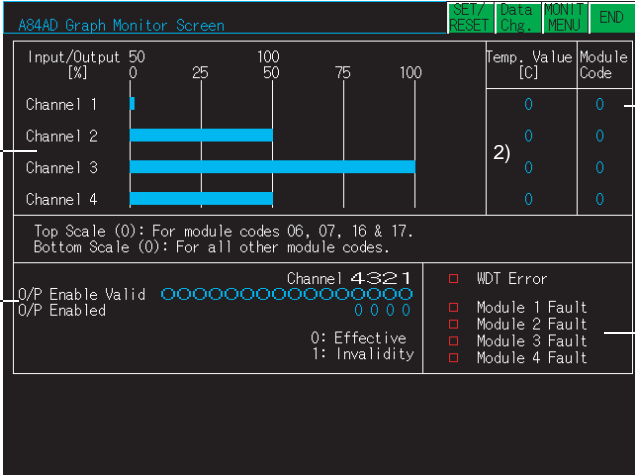
6.5.4 A68RD module monitoring

Screen example		No.	Buffer memory address			
			DEC	HEX		
<div><div>A68RD Operation Monitor Screen</div><div><div><div>1) 0.0</div><div>2) 0.000</div><div>3) 0</div></div><div>Temp. Value (16 bits)</div><div>Temp. Value (32 bits)</div><div>Time/Count</div></div><div><div>1: Enabled 0: Disabled</div><div>Conversion 87654321</div><div>1: Completed 0: Not Completed</div><div>Average/Sample 87654321</div><div>Time/Count 87654321</div><div>1: Averaging 0: Sampling</div><div>1: Time Average 0: Count Average</div><div>CH1 disconn. CH2 disconn. CH3 disconn. CH4 disconn. CH5 disconn. CH6 disconn. CH7 disconn. CH8 disconn.</div></div><div><div>WDT Error</div><div>Error Code: 100</div><div>Temp. Sensor Type 0</div><div>0:New JIS,DIN 1:Old JIS</div></div></div> <div><div>8)</div><div>9)</div><div>10)</div></div>		1)	10 to 17	000A to 0011		
		2)	18 to 33	0012 to 0021		
		3)	2 to 9	0002 to 0009		
		4)	0	0000		
		5)	35	0023		
		6)	1	0001		
		7)	-	-		
		8)	34	0022		
		9)	36	0024		
		10)	-	-		
-	-	-				
<div><div>A68RD Input/Output Monitor Screen</div><div><div>1) 00 WDT Error</div><div>01 READY</div><div>02 Write Data Error</div><div>03 CH1 Disconnected</div><div>04 CH2 Disconnected</div><div>05 CH3 Disconnected</div><div>06 CH4 Disconnected</div><div>07 CH5 Disconnected</div><div>08 CH6 Disconnected</div><div>09 CH7 Disconnected</div><div>0A CH8 Disconnected</div><div>0B</div><div>0C</div><div>0D</div><div>0E</div><div>0F</div></div><div><div>10</div><div>11</div><div>12</div><div>13</div><div>14</div><div>15</div><div>16</div><div>17</div><div>18</div><div>19</div><div>1A</div><div>1B</div><div>1C</div><div>1D</div><div>1E</div><div>1F</div></div><div><div>00</div><div>01</div><div>02 Error Reset</div><div>03</div><div>04</div><div>05</div><div>06</div><div>07</div><div>08</div><div>09</div><div>0A</div><div>0B</div><div>0C</div><div>0D</div><div>0E</div><div>0F</div></div></div> <div><div>-</div><div>-</div><div>-</div></div>		1)	-	-		
		-	-	-		
		<div><div>A68RD Graph Monitor Screen</div><div><div><div>1) 500</div><div>400</div><div>300</div><div>200</div><div>100</div><div>0</div><div>-100</div><div>-180</div></div><div>Temperature</div><div>1 2 3 4 5 6 7 8</div></div><div><div>1: Enabled 0: Disabled</div><div>Conversion 87654321</div><div>1: Completed 0: Not Completed</div><div>Sample/Average 87654321</div><div>Count/Time 87654321</div><div>1: Averaging 0: Sampling</div><div>1: Time Average 0: Count Average</div><div>CH1 disconn. CH2 disconn. CH3 disconn. CH4 disconn. CH5 disconn. CH6 disconn. CH7 disconn. CH8 disconn.</div></div><div><div>WDT Error</div><div>Error Code: 100</div><div>Temp. Sensor Type 0</div><div>0:New JIS,DIN 1:Old JIS</div></div></div> <div><div>6)</div><div>7)</div></div>		1)	10 to 17	000A to 0011
				2)	0	0000
				3)	35	0023
				4)	1	0001
				5)	-	-
				6)	34	0022
				7)	36	0024
				-	-	-

6.5.5 A84AD module monitoring

Screen example	No.	Buffer memory address	
		DEC	HEX
<p>1) 1) 2)</p>  <p>3) 4) 5) 6) 7) 8) 9)</p>	1)	10 to 13	000A to 000D
	2)	18 to 21	0012 to 0015
	3)	28 to 31	001C to 001F
	4)	22 to 25	0016 to 0019
	5)	22 to 25	0016 to 0019
	6)	26	001A
	7)	27	001B
	8)	-	-
	9)	-	-
<p>1)</p>  <p>2) 3) 4)</p>	1)	1	0001
	2)	2 to 5	0002 to 0005
	3)	32, 34, 36, 38	0020, 0022, 0024, 0026
	4)	33, 35, 37, 39	0021, 0023, 0025, 0027
<p>1)</p> 	1)	-	-
	-	-	-

Screen example		Buffer memory address	
No.		DEC	HEX
1)		10 to 13	000A to 000D
2)		18 to 21	0012 to 0015
3)		28 to 31	001C to 001F
4)		27	001B
5)		-	-
-		-	-



1)

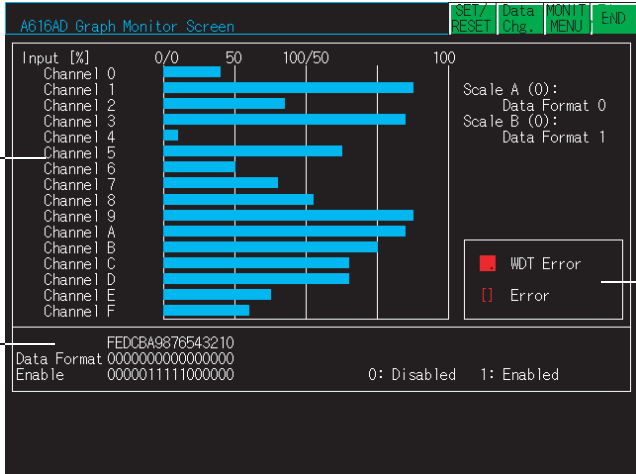
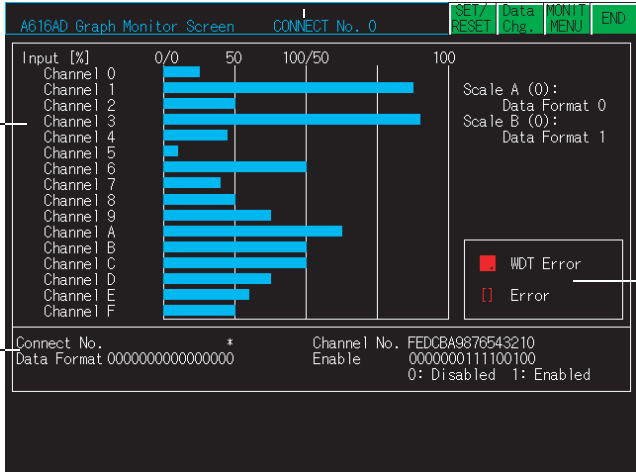
3)

4)

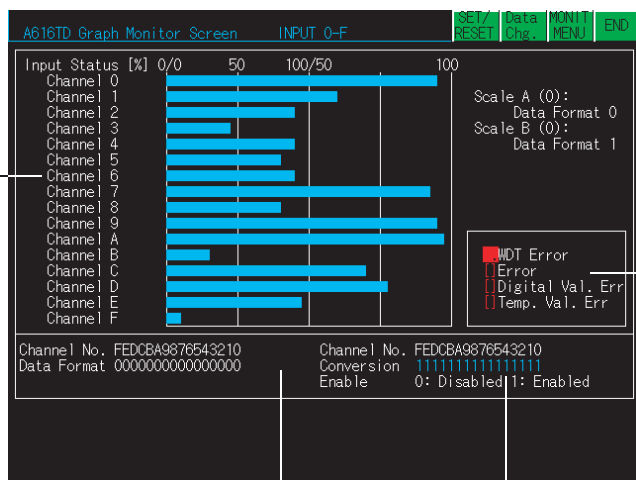
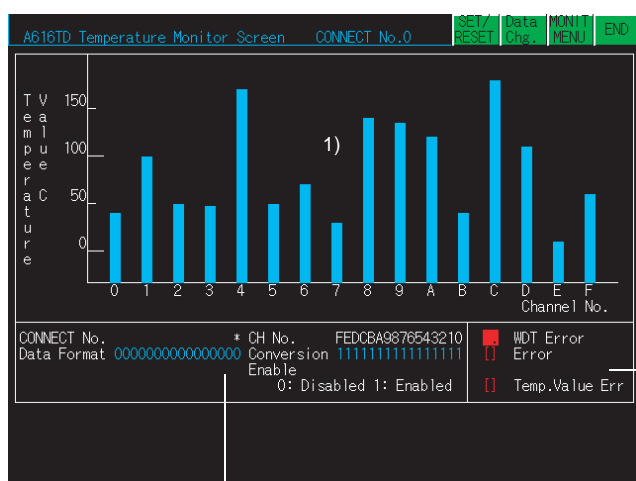
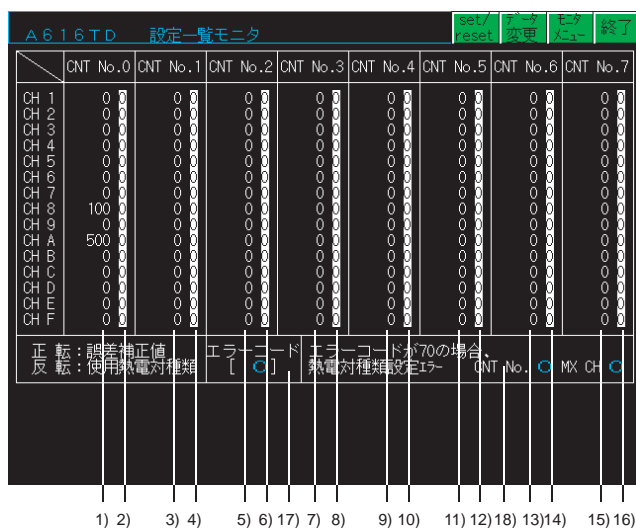
5)

6.5.6 A616AD module monitoring

Screen example		No.	Buffer memory address		
			DEC	HEX	
<div><div><div>A616AD Operation Monitor Screen</div><div>SET/ Data MONI/ END RESET Chg. MENU</div></div><div><div>1) Enable FEDCBA9876543210 0: Disabled 1: Enabled</div><div>2) Data Format FEDCBA9876543210 Setting 0000000000000000</div><div>3) Input Status [%] For Data Format 0: Refer to left hand side values. Format 1: Refer to right hand side values.</div><div>CH 0 0.0 0.0 CH 8 0.0 0.0 CH 1 0.0 0.0 CH 9 0.0 0.0 CH 2 0.0 0.0 CH A 0.0 0.0 CH 3 0.0 0.0 CH B 0.0 0.0 CH 4 0.0 0.0 CH C 0.0 0.0 CH 5 0.0 0.0 CH D 0.0 0.0 CH 6 0.0 0.0 CH E 0.0 0.0 CH 7 0.0 0.0 CH F 0.0 0.0</div><div>Direct Access INPUT CH:4 MX CH:4 I/P: 0.0 50.0</div></div></div>		4) 5) 6)	1) 2) 3) 4) 5) 6) 7) 8)	15 4 48 to 63 5 6 3 0,1 2 - -	000F 0004 0030 to 003F 0005 0006 0003 0000, 0001 0002 - -
<div><div><div>A616AD Operation Monitor Screen</div><div>CONNECT No.0 SET/ Data MONI/ END RESET Chg. MENU</div></div><div><div>1) Enable FEDCBA9876543210 0: Disabled 1: Enabled</div><div>2) Data Format * Setting 0000000000000000</div><div>3) Input Status [%] For Data Format 0: Refer to left hand side values. Format 1: Refer to right hand side values.</div><div>CH 0 0.0 0.0 CH 8 0.0 0.0 CH 1 0.0 0.0 CH 9 0.0 0.0 CH 2 0.0 0.0 CH A 0.0 0.0 CH 3 0.0 0.0 CH B 0.0 0.0 CH 4 0.0 0.0 CH C 0.0 0.0 CH 5 0.0 0.0 CH D 0.0 0.0 CH 6 0.0 0.0 CH E 0.0 0.0 CH 7 0.0 0.0 CH F 0.0 0.0</div><div>Direct Access INPUT CH:0 MX CH:0 I/P: 0.0 0.0</div></div></div>		4) 5) 6)	1) 2) 3) 4) 5) 6) 7) 8) 9)	16 to 23 4 256 to 383 5 6 3 0 1 2 - -	0010 to 0017 0004 0100 to 017F 0005 0006 0003 0000 0001 0002 - -
<div><div><div>A616AD Input/Output Monitor Screen</div><div>SET/ Data MONI/ END RESET Chg. MENU</div></div><div>1) Inputs (X) Outputs (Y) 00 WDT Error 00 00 01 READY 01 01 02 Error 02 02 03 03 04 04 05 05 06 06 07 07 08 08 09 09 0A 0A 0B 0B 0C 0C 0D 0D 0E 0E 0F 0F Direct Access</div></div>			1)	- - - - - - - - - - - -	- - - - - - - - - - - -

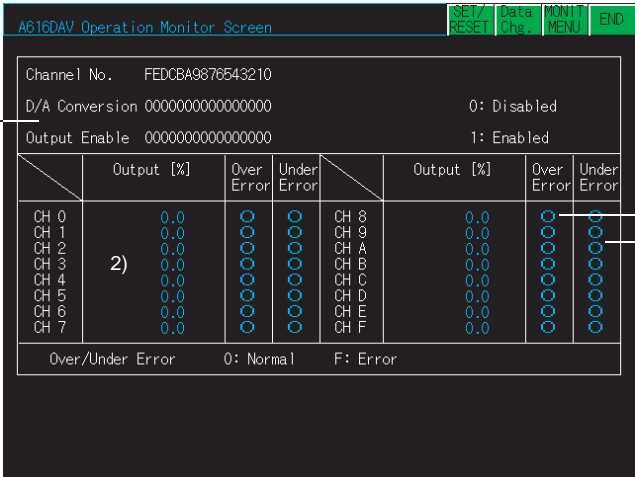
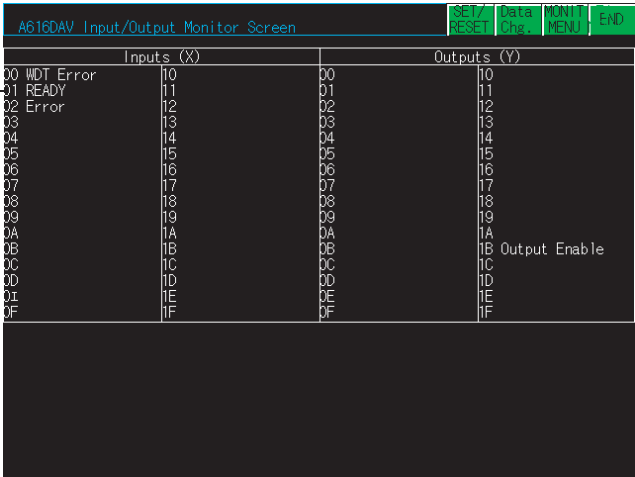
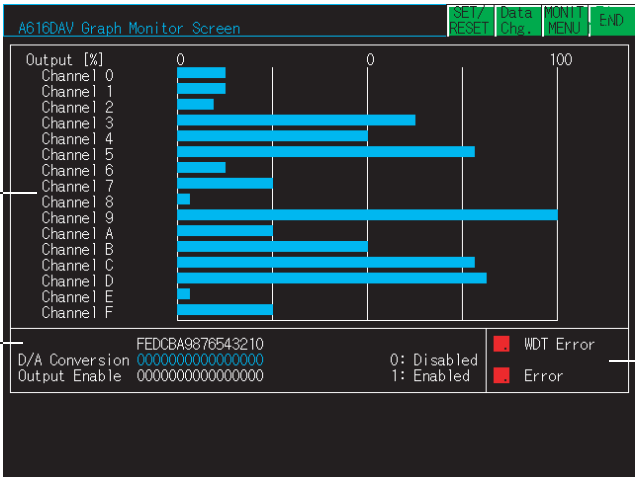
Screen example		No.	Buffer memory address	
			DEC	HEX
	1)	48 to 63	0030 to 003F	
	2)	-	-	
	3)	4	0004	
		15	000F	
	-	-	-	
		1)	256 to 383	0100 to 017F
		2)	-	-
		3)	4	0004
			16 to 23	0010 to 0017
		-	-	-

Screen example		Buffer memory address	
No.		DEC	HEX
1)		129 to 143	0081 to 008F
2)		257 to 271	0101 to 010F
3)		145 to 159	0091 to 009F
4)		273 to 287	0111 to 011F
5)		161 to 175	00A1 to 00AF
6)		289 to 303	0121 to 012F
7)		177 to 191	00B1 to 00BF
8)		305 to 319	0131 to 013F
9)		193 to 207	00C1 to 00CF
10)		321 to 335	0141 to 014F
11)		209 to 223	00D1 to 00DF
12)		337 to 351	0151 to 015F
13)		225 to 239	00E1 to 00EF
14)		353 to 367	0161 to 016F
15)		241 to 255	00F1 to 00FF
16)		369 to 383	0171 to 017F
17)		1	0001
18)		3	0003
-		-	-
1)		512 to 639	0200 to 027F
2)		0	0000
3)		16 to 23	0010 to 0017
-		-	-
1)		112 to 127	0070 to 007F
2)		-	-
3)		0	0000
4)		15	000F
-		-	-



Screen example		Buffer memory address	
No.		DEC	HEX
		384 to 511	0180 to 01FF
1)		512 to 639	0200 to 027F
2)		-	-
3)		0	0000
4)		16 to 23	0010 to 0017
-		-	-

6.5.8 A616DAV module monitoring

Screen example		Buffer memory address	
		DEC	HEX
	1)	0	0000
		1	0001
	2)	16 to 31	0010 to 001F
	3)	48 to 63	0030 to 003F
	4)	48 to 63	0030 to 003F
	-	-	-
	1)	-	-
	-	-	-
	1)	16 to 31	10 to 1F
	2)	0	0
		1	1
	3)	-	-
	-	-	-

6.5.9 A616DAI module monitoring

Refer to the following for further information about the screen for A616DAI and the buffer memory address.

 6.5.8 A616DAV module monitoring

1

OVERVIEW

2

SYSTEM MONITOR

3

LADDER MONITOR
FUNCTION

4

MELSEC-A LIST EDITOR

5

MELSEC-FX LIST
EDITOR

6

INTELLIGENT MODULE
MONITOR

7

NETWORK MONITOR

8

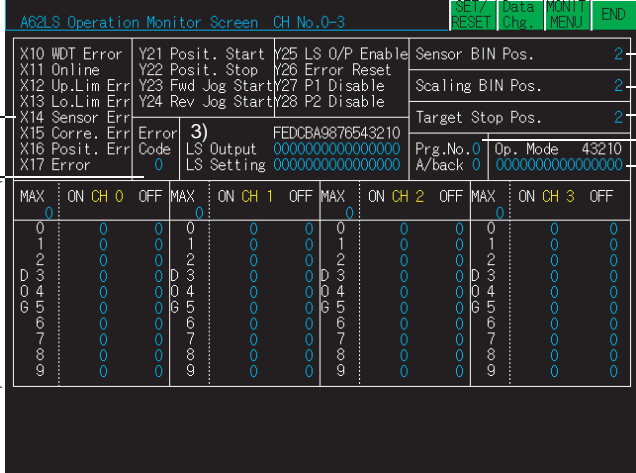
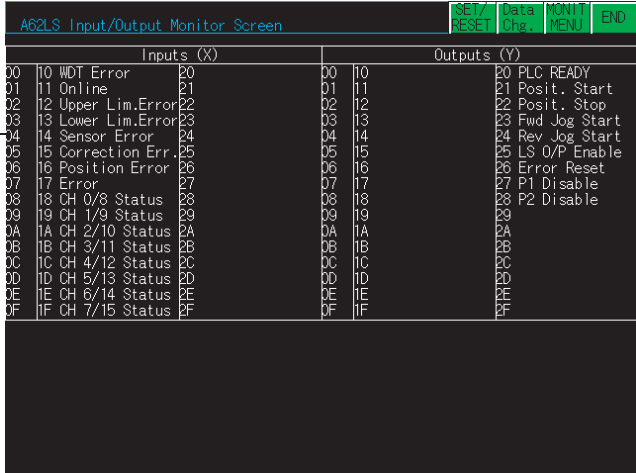
Q MOTION MONITOR

6.5.10 A61LS module monitoring

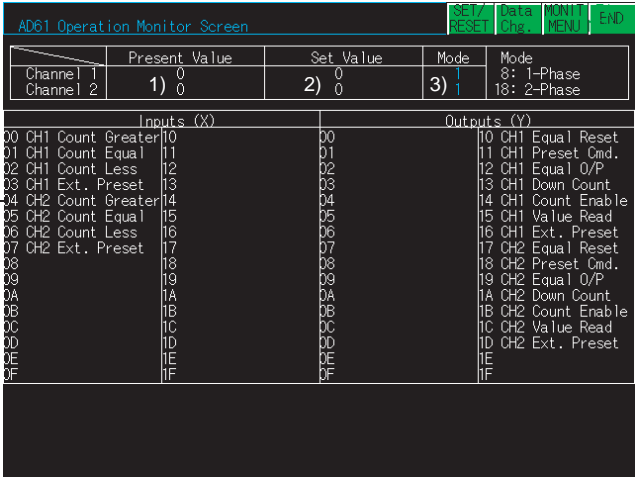
Screen example		No.	Buffer memory address																															
			DEC	HEX																														
<div><div>A61LS Operation Monitor Screen</div><div><div><div>1)</div><div>Limit Switch Function Program No. 0</div></div><div><div>2)</div><div><div>Channel No. FDCBA9876543210</div><div>Output Status 0000000000000000</div><div>Output Enable 0000000000000000</div><div>Status 0:OFF 1:ON Enable 0:Enabled 1:Disabled</div></div><div><div>3)</div><div>Measured Distance 0</div></div><div><div>4)</div><div>Resolver Speed 0 rpm</div></div><div><div>5)</div><div>Target Address 0 Error 0</div></div><div><div>6)</div><div>Compensation Val. 0 Underflow 0 Overflow 0 Batt.Error 0</div></div><div><div>7)</div><div>Compensated Address 0 0:Normal 1:Error</div></div><div><div>Positioning Data</div><div><div>Channel 0</div><div>Channel 1</div><div>Channel 2</div><div>Channel 3</div><div>Channel 4</div><div>Channel 5</div><div>Channel 6</div><div>Channel 7</div><div>Channel 8</div><div>Channel 9</div><div>Channel A</div><div>Channel B</div><div>Channel C</div><div>Channel D</div><div>Channel E</div><div>Channel F</div></div><div><div>Set Value A</div><div>Set Value B</div></div></div></div></div><div><div>8)</div><div>9)</div><div>10)</div><div>10)</div></div></div> <tr><td>1)</td><td>11</td><td>000B</td></tr> <tr><td>2)</td><td>4,10</td><td>0004, 000A</td></tr> <tr><td>3)</td><td>5, 6</td><td>0005, 0006</td></tr> <tr><td>4)</td><td>3</td><td>0003</td></tr> <tr><td>5)</td><td>12</td><td>000C</td></tr> <tr><td>6)</td><td>7</td><td>0007</td></tr> <tr><td>7)</td><td>0</td><td>0000</td></tr> <tr><td>8)</td><td>8</td><td>0008</td></tr> <tr><td>9)</td><td>2,1,9</td><td>0002,0001,0009</td></tr> <tr><td>10)</td><td>13 to 44</td><td>000D to 002C</td></tr> <tr><td>-</td><td>-</td><td>-</td></tr>		1)	11	000B	2)	4,10	0004, 000A	3)	5, 6	0005, 0006	4)	3	0003	5)	12	000C	6)	7	0007	7)	0	0000	8)	8	0008	9)	2,1,9	0002,0001,0009	10)	13 to 44	000D to 002C	-	-	-
		1)	11	000B																														
		2)	4,10	0004, 000A																														
		3)	5, 6	0005, 0006																														
		4)	3	0003																														
		5)	12	000C																														
		6)	7	0007																														
		7)	0	0000																														
		8)	8	0008																														
		9)	2,1,9	0002,0001,0009																														
10)	13 to 44	000D to 002C																																
-	-	-																																

Screen example		No.	Buffer memory address				
			DEC	HEX			
<div><div>A61LS Input/Output Monitor Screen</div><div><div><div>1)</div><div><div><div>Inputs (X)</div><div><div>00 WDT Error 10</div><div>01 Online 11</div><div>02 Overflow Detect. 12</div><div>03 Underflow Detect. 13</div><div>04 Resolver Direct. 14</div><div>05 Comp. Val. Exceed 15</div><div>06 Resolver Error 16</div><div>07 Error Detect 17</div><div>08 CH0 ON/OFF Status 18</div><div>09 CH1 ON/OFF Status 19</div><div>0A CH2 ON/OFF Status 1A</div><div>0B CH3 ON/OFF Status 1B</div><div>0C CH4 ON/OFF Status 1C</div><div>0D CH5 ON/OFF Status 1D</div><div>0E CH6 ON/OFF Status 1E</div><div>0F CH7 ON/OFF Status 1F</div></div><div><div>Outputs (Y)</div><div><div>10 PLC READY</div><div>11 Posit. Start</div><div>12 Limit Func.Start</div><div>13 Overflow Reset</div><div>14 Underflow Reset</div><div>15 Error Reset</div><div>16</div><div>17</div><div>18</div><div>19</div><div>1A</div><div>1B</div><div>1C</div><div>1D</div><div>1E</div><div>1F</div></div></div></div></div></div><div><div>-</div><div>-</div><div>-</div></div></div><tr><td>1)</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr></div>		1)	-	-	-	-	-
		1)	-	-			
		-	-	-			

6.5.11 A62LS module monitoring

Screen example		No.	Buffer memory address	
			DEC	HEX
		1)	-	-
		2)	7	0007
		3)	4	0004
			8	0008
		4)	2	0002
		5)	0	0000
		6)	10	000A
		7)	9	0009
		8)	5	0005
		9)	6	0006
		10)	12 to 667	000C to 029B
		1)	-	-
		-	-	-

6.5.12 AD61 module monitoring

Screen example	No.	Buffer memory address	
		DEC	HEX
 <p>4) —</p>	1)	4, 5, 36, 37	0004, 0005, 0024, 0025
	2)	6, 7, 38, 39	0006, 0007, 0026, 0027
	3)	3, 35	0003, 0023
	4)	-	-
	-	-	-

6.5.13 AD70 module monitoring

Screen example		No.	Buffer memory address	
			DEC	HEX
<div> <div>AD70 Positioning & Parameter Data Monitor Screen</div> <div> <div>Y11 Ab.Posit. Start</div> <div>Y12 Forward Start</div> <div>Y13 Reverse Start</div> <div>Y14 Fwd. Jog Start</div> <div>Y15 Rev. Jog Start</div> <div>Y16 Vel/Pos Restart</div> <div>X05 Posit. Complete</div> <div>X02 Zero Rtn Request</div> <div>Y10 Zero Rtn Start</div> <div>X03 Zero Rtn Comple.</div> <div>Y17 Stop</div> <div>X04 BUSY</div> <div>X06 In-position</div> <div>Y1C V/P Switchover</div> <div>X00 WDT Error</div> <div>X07 Excessive Error</div> <div>X08 Error Detection</div> </div> <div> <div>Feed Position 2) 0</div> <div>Actual Position 3) 0</div> <div>Error Counter 4) 0</div> <div>Pos.Address P1 5) 0</div> <div>Pos.Address P2 6) 0</div> <div>Pos.Velocity V1 7) 0 PLS/s</div> <div>Pos.Velocity V2 8) 0 PLS/s</div> <div>Pos.Pattern 0</div> <div>V/P Mode 0</div> <div>0: Positioning</div> <div>1: Velocity</div> <div>Error Code 1: 0 2: 0</div> </div> <div> <div>Present Value 0</div> <div>Travel Dist. 0</div> <div>Velocity 0 PLS/s</div> <div>Jog Velocity 0 PLS/s</div> <div>Upper Limit 2147483647</div> <div>Lower Limit 0</div> <div>Gear Ratio 1: 1</div> <div>Velocity Limit 20000 PLS/s</div> <div>Accel.Time 300 ms</div> <div>Decel.Time 300 ms</div> <div>In-Position Range 150</div> <div>Positioning Mode 0</div> </div> </div>	<div> <div>11)</div> <div>12)</div> </div>	1)	-	-
		2)	100, 101	0064, 0065
		3)	102, 103	0066, 0067
		4)	106, 107	006A, 006B
		5)	61, 62	003D, 003E
		6)	65, 66	0041, 0042
		7)	63, 64	003F, 0040
		8)	67, 68	0043, 0044
		9)	60	003C
		10)	111	006F
		11)	104	0068
		12)	105	0069
		13)	80, 81	0050, 0051
		14)	88, 89	0058, 0059
		15)	82, 83	0052, 0053
		16)	84, 85	0054, 0055
		17)	0, 1	0000, 0001
		18)	2, 3	0002, 0003
		19)	4, 5	0004, 0005
		20)	20, 21	0014, 0015
		21)	22	0016
		22)	23	0017
		23)	24	0018
		24)	25	0019
<div> <div>AD70 Zero Return Data Monitor Screen</div> <div> <div>Y11 Ab.Posit. Start</div> <div>Y12 Forward Start</div> <div>Y13 Reverse Start</div> <div>Y14 Fwd. Jog Start</div> <div>Y15 Rev. Jog Start</div> <div>Y16 Vel/Pos Restart</div> <div>X05 Posit. Complete</div> <div>X02 Zero Rtn Request</div> <div>Y10 Zero Rtn Start</div> <div>X03 Zero Rtn Comple.</div> <div>Y17 Stop</div> <div>X04 BUSY</div> <div>X06 In-position</div> <div>Y1C V/P Switchover</div> <div>X00 WDT Error</div> <div>X07 Excessive Error</div> <div>X08 Error Detection</div> </div> <div> <div>Feed Position 2) 0</div> <div>Actual Position 3) 0</div> <div>Error Counter 4) 0</div> <div>Pos.Address P1 5) 0</div> <div>Pos.Address P2 6) 0</div> <div>Pos.Velocity V1 7) 0 PLS/s</div> <div>Pos.Velocity V2 8) 0 PLS/s</div> <div>Pos.Pattern 0</div> <div>V/P Mode 0</div> <div>0: Positioning</div> <div>1: Velocity</div> <div>Error Code 1: 0 2: 0</div> </div> <div> <div>Present Value 0</div> <div>Travel Dist. 0</div> <div>Velocity 0 PLS/s</div> <div>Jog Velocity 0 PLS/s</div> <div>Travel Dist. After Near Zero Point Signal Turned ON 0</div> <div>Travel Dist. After Near Zero Point Signal ON 0</div> <div>Zero Address 0</div> <div>Zero Rtn Vel. 0 PLS/s</div> <div>Creep Velocity 0 PLS/s</div> </div> </div>	<div> <div>10)</div> <div>11)</div> <div>12)</div> </div>	1)	-	-
		2)	100, 101	0064, 0065
		3)	102, 103	0066, 0067
		4)	106, 107	006A, 006B
		5)	61, 62	003D, 003E
		6)	65, 66	0041, 0042
		7)	63, 64	003F, 0040
		8)	67, 68	0043, 0044
		9)	60	003C
		10)	111	006F
		11)	104	0068
		12)	105	0069
		13)	80, 81	0050, 0051
		14)	88, 89	0058, 0059
		15)	82, 83	0052, 0053
		16)	84, 85	0054, 0055
		17)	108, 109	006C, 006D
		18)	46, 47	002E, 002F
		19)	40, 41	0028, 0029
		20)	42, 43	002A, 002B
		21)	44, 45	002C, 002D

Screen example	No.	Buffer memory address	
		DEC	HEX
<div> <div>AD70 Input/Output Monitor Screen</div> <div> <div>SET</div> <div>DATA</div> <div>MONIT</div> <div>END</div> </div> <div> <div>RESET</div> <div>Chg</div> <div>MENU</div> </div> </div> <div> <div>Inputs (X)</div> <div> <div>00 WDT Error</div> <div>01 AD70 READY</div> <div>02 Zero Rtn Request</div> <div>03 Zero Rtn Comple</div> <div>04 BUSY</div> <div>05 Posit.Complete</div> <div>06 In-position</div> <div>07 Excessive Error</div> <div>08 Error Detection</div> <div>09 Overflow</div> <div>0A Underflow</div> <div>0B Servo Ready</div> <div>0C Near Zero Point</div> <div>0D Stop (External)</div> <div>0E Upper Limit LS</div> <div>0F Lower Limit LS</div> </div> <div> <div>Outputs (Y)</div> <div> <div>00 Zero Rtn Start</div> <div>01 Posit. Start</div> <div>02 Forward Start</div> <div>03 Reverse Start</div> <div>04 Fwd. Jog Start</div> <div>05 Rev. Jog Start</div> <div>06 Vel/Pos Restart</div> <div>07 Stop</div> <div>08 Error Reset</div> <div>09 Overflow Reset</div> <div>0A Underflow Reset</div> <div>0B V/P Switchover</div> <div>0C PLC READY</div> </div> </div> </div>	1)	-	-
	-	-	-

6.5.14 AD70D module monitoring

Screen example		No.	Buffer memory address	
			DEC	HEX
		1)	-	-
		2)	100, 101	0064, 0065
		3)	102, 103	0066, 0067
		4)	104, 105	0068, 0069
		5)	61, 62	003D, 003E
		6)	65, 66	0041, 0042
		7)	63, 64	003F, 0040
		8)	67, 68	0043, 0044
		9)	60	003C
		10)	119	0077
		11)	120	0078
		12)	121	0079
		13)	122	007A
		14)	123	007B
		15)	80, 81	0050, 0051
		16)	86, 87	0056, 0057
		17)	82, 83	0052, 0053
		18)	84, 85	0054, 0055
		19)	89	0059
		20)	110	006E
		21)	111	006F
		22)	112	0070
		23)	113	0071
		24)	125	007D
		25)	126	007E

AD70D Positioning Data Monitor Screen		SET/	Data	MONIT	END
		RESET	Chg.	MENU	
Y11 Posit. Start	Feed Position 2)	0	Present Value	0	15)
Y12 Forward Start	Actual Position 3)	0	Travel Dist.	0	16)
Y13 Reverse Start	Error Counter 4)	0	Velocity	0 PLS/s	17)
Y14 Fwd. Jog Start	Pos.Address P1 5)	0	Jog Velocity	0 PLS/s	18)
Y15 Rev. Jog Start	Pos.Address P2 6)	0	Torque Limit	0 %	19)
Y16 Vel/Pos Restart	Pos.Velocity V1 7)	0 PLS/s	Motor Speed	0 rpm	20)
X05 Posit. Complete	Pos.Velocity V2 8)	0 PLS/s	Motor Current	0 %	21)
X02 Zero Rtn Request	Pos.Pattern 9)	0	Regen. Level	0 %	22)
Y17 Stop	V/P Mode 0 0: Pos 1: Vel		Max. Torque	0 %	23)
X04 BUSY	Torque Control Mode 0		Test Mode	0000000000000000	24)
X06 In-position	Err.Code 1: 0 2: 0 S: 0		S/Switch	0000000000000000	25)
Y1B Servo OFF					
Y1C V/P Switchover					
X00 WDT Error					
X08 Error Detection					
	10)	11)	12)	13)	14)

AD70D Zero Return Data Monitor Screen		SET/	Data	MONIT	END
		RESET	Chg.	MENU	
Y11 Posit. Start	Feed Position 2)	0	Present Value	0	16)
Y12 Forward Start	Actual Position 3)	0	Travel Dist.	0	17)
Y13 Reverse Start	Error Counter 4)	0	Velocity	0 PLS/s	18)
Y14 Fwd. Jog Start	Zero Address 5)	0	Jog Velocity	0 PLS/s	19)
Y15 Rev. Jog Start	Zero Rtn Vel. 6)	10000 PLS/s	Torque Limit	0 %	20)
Y16 Vel/Pos Restart	Creep Velocity 7)	1000 PLS/s	Motor Speed	0 rpm	21)
X05 Posit. Complete	Zero Rtn Dist. 8)	0	Motor Current	0 %	22)
X02 Zero Rtn Request	Near Zero Dist. 9)	0	Regen. Level	0 %	23)
Y17 Stop	Near Zero Set. 10)	0	Max. Torque	0 %	24)
X04 BUSY	V/P Mode 0 0: Pos 1: Vel		Test Mode	0000000000000000	25)
X06 In-position	Torque Control Mode 0		S/Switch	0000000000000000	26)
Y1B Servo OFF					
Y1C V/P Switchover					
X00 WDT Error					
X08 Error Detection					
	11)	12)	13)	14)	15)

		1)	-	-
		2)	100, 101	0064, 0065
		3)	102, 103	0066, 0067
		4)	104, 105	0068, 0069
		5)	30, 31	001E, 001F
		6)	32, 33	0020, 0021
		7)	34, 35	0022, 0023
		8)	108, 109	006C, 006D
		9)	106, 107	006A, 006B
		10)	36, 37	0024, 0025
		11)	119	0077
		12)	120	0078
		13)	121	0079
		14)	122	007A
		15)	123	007B
		16)	80, 81	0050, 0051
		17)	86, 87	0056, 0057
		18)	82, 83	0052, 0053
		19)	84, 85	0054, 0055
		20)	89	0059
		21)	110	006E
		22)	111	006F
		23)	112	0070
		24)	113	0071
		25)	125	007D
		26)	126	007E

Screen example		No.	Buffer memory address	
			DEC	HEX
		1)	-	-
		2)	0, 1	0000, 0001
		3)	2, 3	0002, 0003
		4)	4, 5	0004, 0005
		5)	10	000A
		6)	11	000B
		7)	12	000C
		8)	13	000D
		9)	14	000E
		10)	15	000F
		11)	16	0010
		12)	17	0011
		13)	18	0012
		14)	19	0013
		15)	20	0014
		16)	21	0015
		17)	40, 41	0028, 0029
		18)	42	002A
		19)	43	002B
		20)	44	002C
		21)	114 to 117	0072 to 0075
		22)	125	007D
		23)	126	007E
		1)	-	-

1)		AD70D Parameter Data Monitor Screen		SET/	Data	MONIT	END	
				RESET	Chg.	MENU		
Y11 Posit. Start	Upper Limit 2)	2147483647	In-position Range	100 PLS				13)
Y12 Forward Start	Lower Limit 3)	0	Feedback Pulses	12000 PLS				14)
Y13 Reverse Start	Electronic Gear 4)	1 / 1	Rotation Direction	0				15)
Y14 Fwd. Jog Start	System Setting 5)	0	Torque Limit	300 %				16)
Y15 Rev. Jog Start	Regen. Resistance 6)	4	Velocity Limit	0 PLS/s				17)
Y16 Vel/Pos Restart	Motor Type 7)	4	Accel. Time	300 ms				18)
X05 Posit. Complete	Motor Capacity 8)	0.0 kW	Decel. Time	300 ms				19)
X02 Zero Rtn Request	Motor Rotations 9)	3392 rpm	Positioning Mode	0				20)
Y10 Zero Rtn Start	Pos. Loop Gain 10)	25 rad/s	Amplifier Ver.	0W 0-				21)
X03 Zero Rtn Comple.	Vel. Loop Gain 11)	100	Test Mode	0000000000000000				22)
Y17 Stop	Vel. Integration 12)	20 ms	S/Switch	0000000000000000				23)
X04 BUSY				87854321				
X06 In-position								
Y18 Servo OFF								
Y1C V/P Switchover								
X00 WDT Error								
X08 Error Detection								

1)		AD70D Input/Output Monitor Screen		SET/	Data	MONIT	END
				RESET	Chg.	MENU	
		Inputs (X)	Outputs (Y)				
00 WDT Error	10	00 Zero Rtn Start	10				
01 READY	11	01 Posit. Start	11				
02 Zero Rtn Request	12	02 Forward Start	12				
03 Zero Rtn Comple.	13	03 Reverse Start	13				
04 BUSY	14	04 Fwd. Jog Start	14				
05 Posit. Complete	15	05 Rev. Jog Start	15				
06 In-position	16	06 Vel/Pos Restart	16				
07 Zero Return	17	07 Stop	17				
08 Error Detection	18	08 Error Reset	18				
09 Overflow	19	09 Overflow Reset	19				
0A Underflow	1A	0A Underflow Reset	1A				
0B Servo Ready	1B	0B Servo OFF	1B				
0C Near Zero Point	1C	0C V/P Switchover	1C				
0D Stop (External)	1D	0D PLC READY	1D				
0E Upper Limit LS	1E		1E				
0F Lower Limit LS	1F		1F				

- 1 OVERVIEW
- 2 SYSTEM MONITOR
- 3 LADDER MONITOR FUNCTION
- 4 MELSEC-A LIST EDITOR
- 5 MELSEC-FX LIST EDITOR
- 6 INTELLIGENT MODULE MONITOR
- 7 NETWORK MONITOR
- 8 Q MOTION MONITOR

6.5 Intelligent Module Monitor Screens	6 - 47
6.5.15 AD71 module monitoring	

Screen example		Buffer memory address				
		No.	X axis		Y axis	
			DEC	HEX	DEC	HEX
<div><div>AD71 Parameter Data Monitor Screen</div><div><div>1)</div><div><div>X</div><div>Y</div><div>Y10 Y11 Posit. Start</div><div>Y12 Interpolation</div><div>X02 X03 Posit. Compl.</div><div>X03 X07 Zero Request</div><div>Y13 Y14 Zero Start</div><div>X0C X0D Zero Complete</div><div>Y17 Y19 Fwd.Jog Start</div><div>Y18 Y1A Rev.Jog Start</div><div>Y15 Y16 Stop</div><div>X08 X09 Pos. Started</div><div>X04 X05 BUSY</div><div>X0E X0F M Code ON</div><div>X00 WDT Err Man.Pulse</div><div>X0A Batt.ErrX:Enable</div><div>X05 Error Y:Disable</div></div><div><div>Travel/Pulse</div><div>Inching Trav.</div><div>Speed Limit</div><div>Jog Spd.Limit</div><div>Acc/Dec Time</div><div>Backlash Comp</div><div>Upper Limit</div><div>Lower Limit</div><div>Error Comp.</div><div>Starting Bias</div><div>Compl.O/P Time</div><div>MCode/ErrCode</div></div><div><div>X Axis</div><div>Y Axis</div><div>3) 1</div><div>4) 1</div><div>5) 120</div><div>6) 120</div><div>7) 1000</div><div>8) -6</div><div>2550</div><div>9) 100</div><div>100</div><div>10) 0</div><div>0</div><div>11) 0</div><div>0</div><div>12) 0</div><div>0</div><div>13) 300</div><div>300</div><div>0 64</div><div>0 64</div></div></div><div><div>16)</div><div>16)</div></div></div>		1)	-	-	-	-
		2)	0	0	347	015B
		3)	7873	1EC1	7893	1ED5
		4)	7884	1ECC	7904	1EE0
			7885	1ECD	7905	1EE1
		5)	7874	1EC2	7894	1ED6
		6)	7875	1EC3	7895	1ED7
		7)	7876	1EC4	7896	1ED8
		8)	7877	1EC5	7897	1ED9
		9)	7878	1EC6	7898	1EDA
			7879	1EC7	7899	1EDB
		10)	7880	1EC8	7900	1EDC
			7881	1EC9	7901	1EDD
		11)	7882	1ECA	7902	1EDE
			7883	1ECB	7903	1EDF
		12)	7886	1ECE	7906	1EE2
13)	7887	1ECF	7907	1EE3		
14)	46	002E	346	015A		
15)	45	002D	345	0159		
16)	7872	1EC0	7892	1ED4		

<div><div>AD71 M Code Comment Monitor Screen</div><div><div>1)</div><div><div>X</div><div>Y</div><div>Y10 Y11 Posit. Start</div><div>Y12 Interpolation</div><div>X02 X03 Posit. Compl.</div><div>X03 X07 Zero Request</div><div>Y13 Y14 Zero Start</div><div>X0C X0D Zero Complete</div><div>Y17 Y19 Fwd.Jog Start</div><div>Y18 Y1A Rev.Jog Start</div><div>Y15 Y16 Stop</div><div>X08 X09 Pos. Started</div><div>X04 X05 BUSY</div><div>X0E X0F M Code ON</div><div>X00 WDT Err Man.Pulse</div><div>X0A Batt.ErrX:Disable</div><div>X05 Error Y:Disable</div></div><div><div>X Axis M Code</div><div>Y Axis M Code</div><div>0 0</div><div>4)</div></div><div><div>Executing Data No.: 535</div><div>Pointer: 0</div><div>Error Code: 64</div><div>Status: 3</div><div>Y Axis</div><div>Executing Data No.: 535</div><div>Pointer: 0</div><div>Error Code: 64</div><div>Status: 3</div></div></div><div><div>3)</div><div>5)</div><div>6)</div><div>7)</div><div>8)</div></div></div>		1)	-	-	-	-
		2)	47	002F	347	015B
		3)	46	002E	346	015A
		4)	49	0031	349	015D
			to	to	to	to
			200	00C8	500	01F4
		5)	48	0030	348	015C
		6)	39	0027	339	0153
		7)	45	002D	345	0159
		8)	43	002B	343	0157
			-	-	-	-
			-	-	-	-
			-	-	-	-
			-	-	-	-
			-	-	-	-
			-	-	-	-

Screen example	No.	Buffer memory address			
		X axis		Y axis	
		DEC	HEX	DEC	HEX
 <p>1) —</p>	1)	-	-	-	-
	-	-	-	-	-
 <p>1) 2) 3) 4) 5)</p>	1)	5072 to 5871	13D0 to 16EF	7072 to 7871	1BA0 to 1EBF
	2)	4272 to 4671	10B0 to 123F	6272 to 6671	1880 to 1A0F
	3)	4672 to 5071	1240 to 13CF	6672 to 7071	1A10 to 1B9F
	4)	3872 to 4271	0F20 to 10AF	5872 to 6271	16F0 to 187F
	5)	3872 to 4271	0F20 to 10AF	5872 to 6271	16F0 to 187F
	-	-	-	-	-

6.5.16 AD72/A1SD71 module monitoring

Screen example		Buffer memory address				
		No.	X axis		Y axis	
			DEC	HEX	DEC	HEX
<div>AD72/A1SD71 Positioning Data Monitor Screen</div> <div><div><div>1)</div><div>X Y</div><div>Y20 Y21 Posit. Start</div><div>Y22 Interpolation</div><div>X12 X13 Posit. Compl.</div><div>X16 X17 Zero Request</div><div>Y23 Y24 Zero Start</div><div>X1C X1D Zero Complete</div><div>Y27 Y29 Fwd.Jog Start</div><div>Y28 Y2A Rev.Jog Start</div><div>Y25 Y26 Stop</div><div>X18 X19 Pos. Started</div><div>X14 X15 BUSY</div><div>X1E X1F M Code ON</div><div>X20 X21 In-position</div><div>X22 X23 Excessive Err</div><div>X10 WDT Err Man.Pulse</div><div>X1A Batt.ErrX:Disable</div><div>X1B Error Y:Disable</div></div><div><div>3)X Axis4)</div><div>Y Axis</div><div>Exec.Data No. 855 Pt 0 855 Pt 0</div><div>Present Value 5) 15528176 15528176</div><div>Change Value 6) -16711936 -16711936</div><div>Zero Address 7) 252645135 -252645135</div><div>Output Speed 8) 0 0</div><div>Speed Limit 9) -3856 -3856</div><div>Speed Change 10) -256 -256</div><div>Jog Speed 11) -256 -256</div><div>Jog Spd.Limit 12) -3856 -3856</div><div>MCode/ErrCode 0 70 0 70</div></div><div><div>01 280 280</div><div>02 767 280</div><div>03 280 280</div><div>04 280 280</div><div>05 408 280</div><div>06 408 280</div><div>07 280 280</div><div>08 280 280</div><div>09 280 280</div><div>10 280 280</div><div>11 280 280</div><div>12 280 280</div><div>13 280 280</div><div>14 280 280</div><div>15 280 280</div><div>16 280 280</div><div>17 280 280</div><div>18 280 280</div><div>19 280 280</div><div>20 280 280</div></div></div> <div><div>2)</div><div>13) 14)</div><div>15)</div></div>		1)	-	-	-	-
		2)	47	002F	347	015B
		3)	48	0030	348	015C
		4)	39	0027	339	0153
		5)	602	025A	604	025C
			603	025B	605	025D
		6)	41	0029	341	0155
			42	002A	342	0156
		7)	7912	1EE8	7922	1EF2
			7913	1EE9	7923	1EF3
		8)	600	0258	601	0259
		9)	7874	1EC2	7894	1ED6
		10)	40	0028	340	0154
		11)	44	002C	344	0158
12)	7875	1EC3	7895	1ED7		
13)	46	002E	346	015A		
14)	45	002D	345	0159		
15)	0	0000	300	012C		
	to	to	to	to		
	37	0025	337	0151		

<div>AD72/A1SD71 Zero Return Data Monitor Screen</div> <div><div>1)</div><div>X Y</div><div>Y20 Y21 Posit. Start</div><div>Y22 Interpolation</div><div>X12 X13 Posit. Compl.</div><div>X16 X17 Zero Request</div><div>Y23 Y24 Zero Start</div><div>X1C X1D Zero Complete</div><div>Y27 Y29 Fwd.Jog Start</div><div>Y28 Y2A Rev.Jog Start</div><div>Y25 Y26 Stop</div><div>X18 X19 Pos. Started</div><div>X14 X15 BUSY</div><div>X1E X1F M Code ON</div><div>X20 X21 In-position</div><div>X22 X23 Excessive Err</div><div>X10 WDT Err Man.Pulse</div><div>X1A Batt.ErrX:Disable</div><div>X1B Error Y:Disable</div></div> <div><div>3)X Axis4)</div><div>Y Axis</div><div>Exec.Data No. 855 Pt 0 855 Pt 0</div><div>Present Value 5) 15528176 15528176</div><div>Change Value 6) -16711936 -16711936</div><div>Zero Address 7) 252645135 -252645135</div><div>Output Speed 8) 0 0</div><div>Speed Limit 9) -3856 -3856</div><div>Speed Change 10) -256 -256</div><div>Jog Speed 11) 0 0</div><div>Jog Spd.Limit 12) 0 0</div><div>Creep Speed 12) 0 0</div><div>MCode/ErrCode 0 70 0 70</div></div> <div><div>X Axis Zero Data</div><div>ABC</div><div>0000111100001111</div><div>Y Axis Zero Data</div><div>ABC</div><div>0000111100001111</div><div>A:0 PG Zero Point</div><div>X Axis: 855</div><div>Y Axis: 680</div><div>0 Mech. Stop</div><div>B:0 Fwd. 1: Rev.</div><div>C:0 Stop/Time Out</div><div>1 Stop/Signal</div><div>Torque Limit</div><div>X Axis: 855</div><div>Y Axis: 680</div><div>Zero Dwell Time</div><div>X Axis: 0</div><div>Y Axis: 0</div></div> <div><div>2)</div><div>13) 14)</div><div>15)</div><div>15)</div><div>16)</div><div>17)</div></div>		1)	-	-	-	-
		2)	47	002F	347	015B
		3)	48	0030	348	015C
		4)	39	0027	339	0153
		5)	602	025A	604	025C
			603	025B	605	025D
		6)	41	0029	341	0155
			42	002A	342	0156
		7)	7912	1EE8	7922	1EF2
			7913	1EE9	7923	1EF3
		8)	600	0258	601	0259
		9)	7874	1EC2	7894	1ED6
		10)	40	0028	340	0154
		11)	7914	1EEA	7924	1EF4
12)	7915	1EEB	7925	1EF5		
13)	46	002E	346	015A		
14)	45	002D	345	0159		
15)	7918	1EEE	7928	1EF8		
16)	7917	1EED	7927	1EF7		
17)	7916	1EEC	7926	1EF6		

Screen example		No.	Buffer memory address			
			X axis		Y axis	
			DEC	HEX	DEC	HEX
<div> <div>AD72/A1SD71 Parameter Data Monitor Screen</div> <div> <div>1)</div> <div>2)</div> <div>14)</div> <div>15)</div> </div> </div>		1)	-	-	-	-
		2)	47	002F	347	015B
		3)	7873	1EC1	7893	1ED5
		4)	7884	1ECC	7904	1EE0
		5)	7874	1EC2	7894	1ED6
		6)	7875	1EC3	7895	1ED7
		7)	7876	1EC4	7896	1ED8
		8)	7877	1EC5	7897	1ED9
		9)	7878	1EC6	7898	1EDA
		10)	7880	1EC8	7900	1EDC
		11)	7882	1ECA	7902	1EDE
		12)	7886	1ECE	7906	1EE2
		13)	7887	1ECF	7907	1EE3
		14)	46	002E	346	015A
		15)	45	002D	345	0159
		16)	7872	1EC0	7892	1ED4
<div> <div>AD72/A1SD71 M Code Comment Monitor Screen</div> <div> <div>1)</div> <div>2)</div> </div> </div>		1)	-	-	-	-
		2)	47	002F	347	015B
		3)	46	002E	346	015A
		4)	49	0031	349	015D
		5)	to	to	to	to
		6)	200	00C8	500	01F4
		7)	48	0030	348	015C
		8)	39	0027	339	0153
		9)	45	002D	345	0159
		10)	43	002B	343	0157
		11)	-	-	-	-
		12)	-	-	-	-
		13)	-	-	-	-
		14)	-	-	-	-
		15)	-	-	-	-
		16)	-	-	-	-

Screen example	No.	Buffer memory address			
		X axis		Y axis	
		DEC	HEX	DEC	HEX
<div><div>AD72/A1SD71 Input/Output Monitor Screen</div><div>SET/RESETDataChgMONIT/MENUEND</div></div> <div><div><div>Inputs (X)</div><div><div>0010 WDT Error</div><div>0111 READY</div><div>0212 X Pos. Complete</div><div>0313 Y Pos. Complete</div><div>0414 X Axis BUSY</div><div>0515 Y Axis BUSY</div><div>0616 X Zero Request</div><div>0717 Y Zero Request</div><div>0818 X Posit.Started</div><div>0919 Y Posit.Started</div><div>0A1A Battery Error</div><div>0B1B Error Detection</div><div>0C1C X Zero Complete</div><div>0D1D Y Zero Complete</div><div>0E1E X M Code ON</div><div>0F1F Y M Code ON</div></div><div><div>Outputs (Y)</div><div><div>0010 X In-position</div><div>0111 Y In-position</div><div>0212 X Excessive Err</div><div>0313 Y Excessive Err</div><div>0414 X Zero Start</div><div>0515 Y Zero Start</div><div>0616 X Stop</div><div>0717 Y Stop</div><div>0818 X Fwd.Jog Start</div><div>0919 X Rev.Jog Start</div><div>0A1A Y Fwd.Jog Start</div><div>0B1B Y Rev.Jog Start</div><div>0C1C X M Code OFF</div><div>0D1D Y M Code OFF</div><div>0E1E PLC READY</div><div>0F1F</div></div></div></div></div>	1)	-	-	-	-
	-	-	-	-	-

<div><div>AD72/A1SD71 Positioning Data Monitor Screen No.01</div><div>SET/RESETDataChgMONIT/MENUEND</div></div> <div><div><div>X</div><div>Address</div><div>Speed</div><div>Dwell</div><div>M Code</div><div>*</div></div><div><div>0010</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0020</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0030</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0040</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0050</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0060</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0070</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0080</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0090</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0100</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0110</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0120</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0130</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0140</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0150</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0160</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0170</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0180</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0190</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0200</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div></div> <div><div><div>Y</div><div>Address</div><div>Speed</div><div>Dwell</div><div>M Code</div><div>*</div></div><div><div>0010</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0020</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0030</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0040</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0050</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0060</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0070</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0080</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0090</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0100</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0110</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0120</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0130</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0140</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0150</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0160</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0170</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0180</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0190</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div><div><div>0200</div><div>0</div><div>0</div><div>0</div><div>0</div><div>C</div></div></div> <div><div>1)2)3)4)5)</div></div>	1)	5072 to 5871	13D0 to 16EF	7072 to 7871	1BA0 to 1EBF
	2)	4272 to 4671	10B0 to 123F	6272 to 6671	1880 to 1A0F
	3)	4672 to 5071	1240 to 13CF	6672 to 7071	1A10 to 1B9F
	4)	3872 to 4271	0F20 to 10AF	5872 to 6271	16F0 to 187F
	5)	3872 to 4271	0F20 to 10AF	5872 to 6271	16F0 to 187F
	-	-	-	-	-

1)

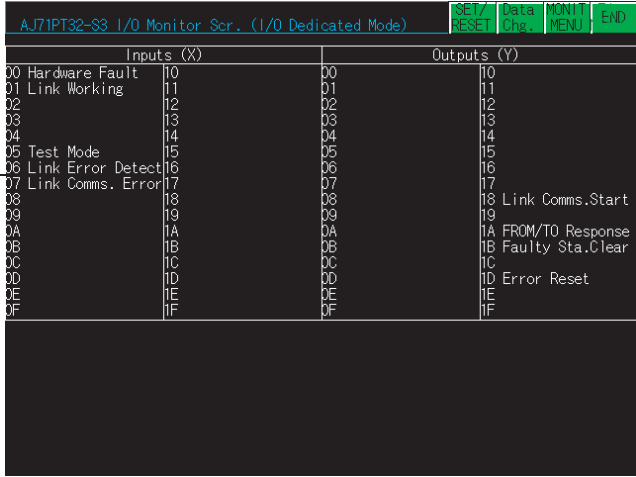
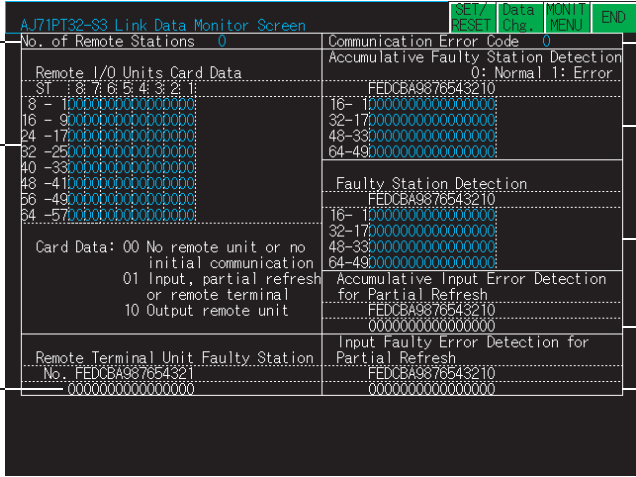
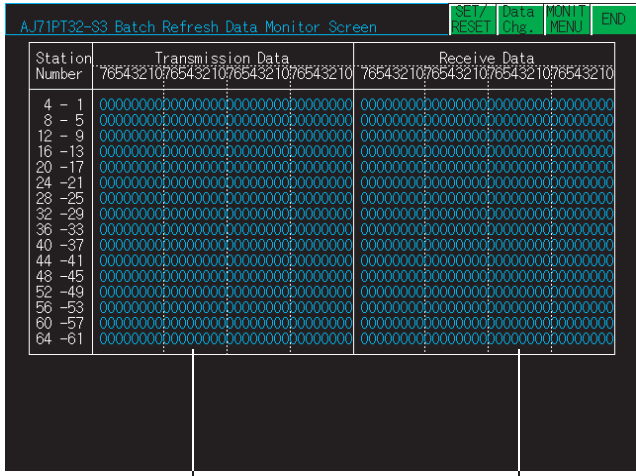
2)

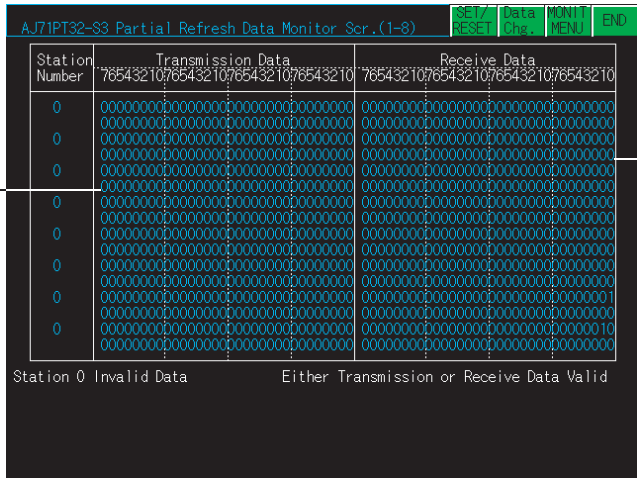
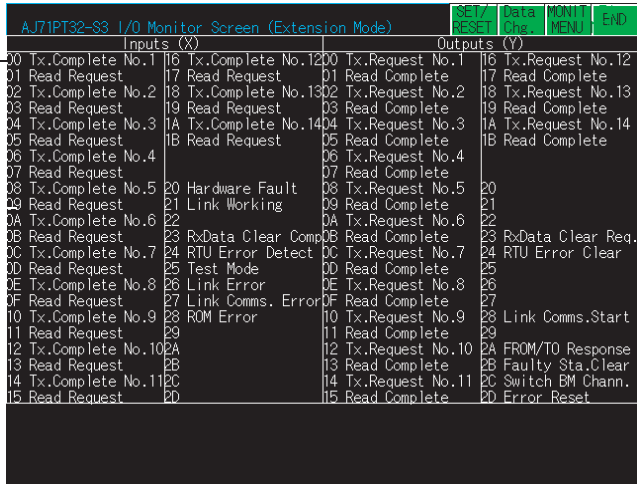
3)

4)

5)

6.5.17 AJ71PT32-S3 module monitoring

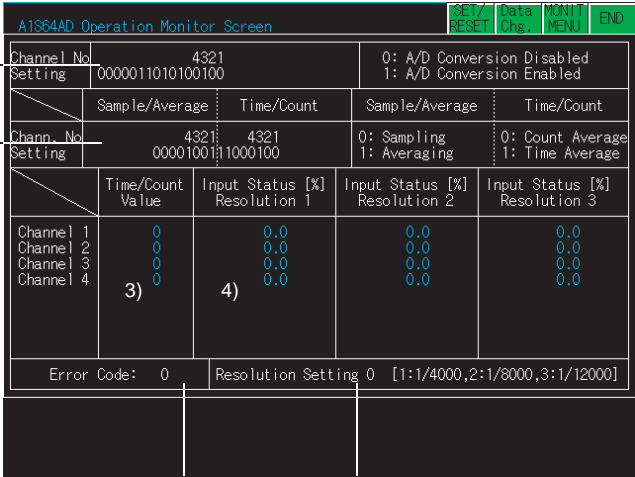
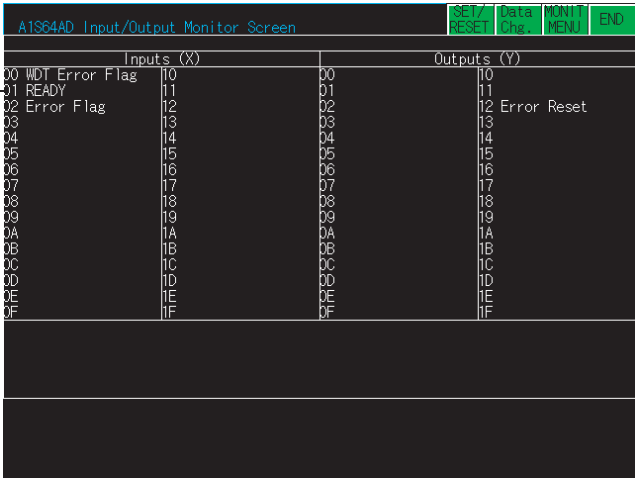
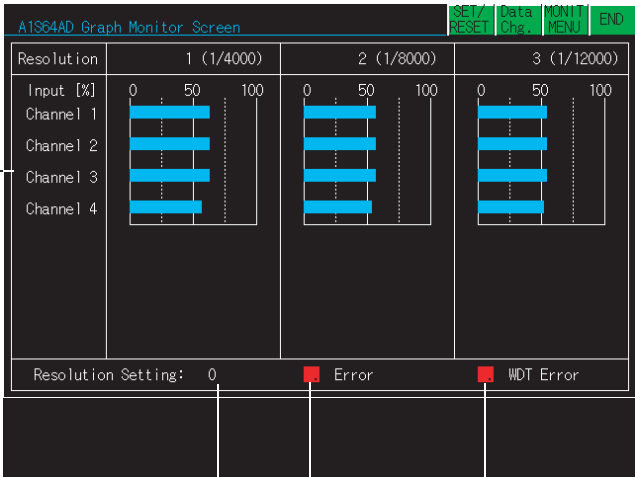
Screen example	No.	Buffer memory address	
		DEC	HEX
	1)	-	-
	1)	0	0000
	2)	70 to 77	0046 to 004D
	3)	195	00C3
	4)	107	006B
	5)	90 to 93	005A to 005D
	6)	100 to 103	0064 to 0067
	7)	598	0256
	8)	599	0257
		-	-
	1)	10 to 41	000A to 0029
	2)	110 to 141	006E to 008D
		-	-

Screen example		No.	Buffer memory address	
			DEC	HEX
		1)	300 to 363	012C to 016B
		2)	600 to 663	0258 to 0297
		-	-	-
		1)	-	-
		-	-	-

1

OVERVIEW

6.5.19 A1S64AD module monitoring

Screen example		Buffer memory address	
		DEC	HEX
 <p>1) Channel No. 4321 Setting 0000011010100100</p> <p>2) Chann. No. 4321 Setting 0000100111000100</p> <p>3) Time/Count Value</p> <p>4) Input Status [%] Resolution 1</p> <p>5) Error Code: 0</p> <p>6) Resolution Setting 0 [1:1/4000,2:1/8000,3:1/12000]</p>		0	0000
		1	0001
		2 to 5	0002 to 0005
		10 to 13	000A to 000D
		18	0012
		20	0014
		-	-
 <p>1) Inputs (X) 00 WDT Error Flag 01 READY 02 Error Flag 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F</p> <p>Outputs (Y) 00 01 02 Error Reset 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F</p>	1)	-	-
		-	-
 <p>1) Resolution 1 (1/4000) 2 (1/8000) 3 (1/12000)</p> <p>Input [%] Channel 1 Channel 2 Channel 3 Channel 4</p> <p>Resolution Setting: 0 Error WDT Error</p> <p>2) 3) 4)</p>	1)	10 to 13	000A to 000D
	2)	20	0014
	3)	-	-
	4)	-	-
		-	-

6.5.20 A1S62DA module monitoring

Screen example		No.	Buffer memory address	
			DEC	HEX
<div><div>A1S62DA Operation Monitor Screen</div><div><div>1) Analog Output Enable/Disable</div><div>Channel No. 21 0000011010100100</div></div><div><div>2) Channel 1 Digital I/P</div><div>2500</div></div><div><div>3) Channel 2 Digital I/P</div><div>1000</div></div><div><div>4) X00 WDT Error Flag X01 D/A Conversion READY X02 Error Flag</div><div>Y10 CH2 D/A Output Enable Flag Y11 CH1 D/A Output Enable Flag Y18 Error Reset</div></div><div><div>V Output [%]</div><div>Channel 1 0 50 100</div><div>1/ 4000 1/ 8000 1/12000</div></div><div><div>AC Output [%]</div><div>Channel 1 0 50 100</div><div>1/ 4000 1/ 8000 1/12000</div></div><div><div>Channel 2 0 50 100</div><div>1/ 4000 1/ 8000 1/12000</div></div><div><div>CH1 Check Code C8</div><div>CH2 Check Code 0</div><div>Resolution Setting 0[1:1/4000,2:1/8000,3:1/12000]</div></div><div><div>11)</div><div>12)</div><div>13)</div></div></div>		1)	0	0000
		2)	1	0001
		3)	2	0002
		4)	-	-
		5)	1, 2	0001, 0002
		6)		
		7)		
		8)		
		9)		
		10)	10	000A
		12)	11	000B
		13)	9	0009
		-	-	-

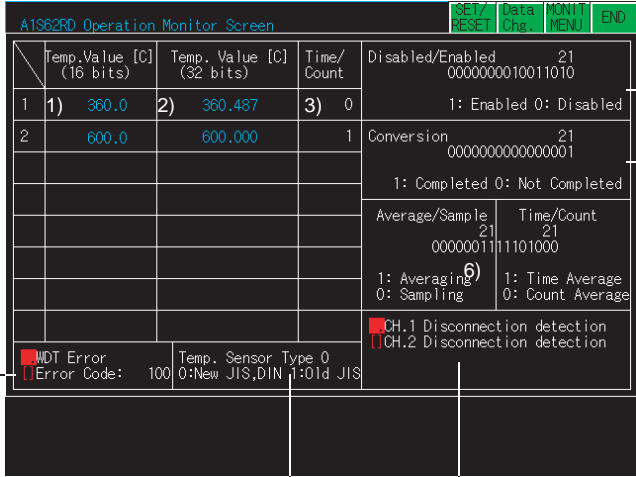
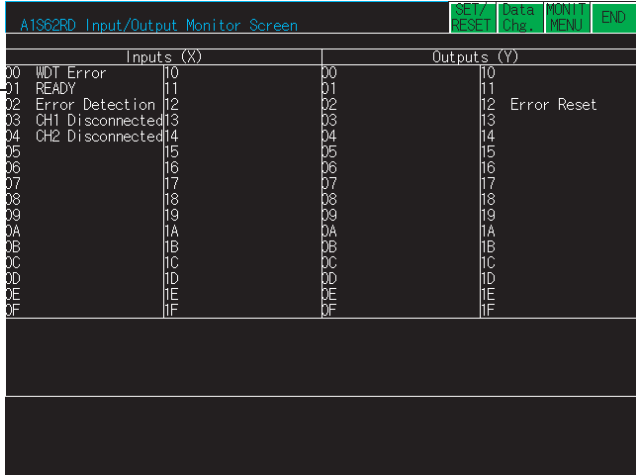
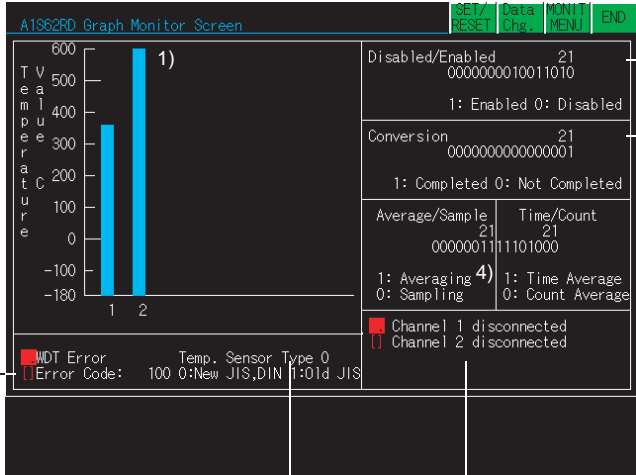
6.5.21 A1SD70 module monitoring

Refer to the following for further information about the screen for A1SD70 and the buffer memory address.



6.5.13 AD70 module monitoring

6.5.22 A1S62RD module monitoring

Screen example	No.	Buffer memory address	
		DEC	HEX
 <p>1) Temp. Value [C] (16 bits) 360.0</p> <p>2) Temp. Value [C] (32 bits) 360.487</p> <p>3) Time/Count 0</p> <p>4) Disabled/Enabled 21 0000000010011010</p> <p>5) Conversion 21 0000000000000001</p> <p>6) Average/Sample 21 0000001111101000</p> <p>7) WDT Error Error Code: 100</p> <p>Temp. Sensor Type 0 0: New JIS, DIN 1: 01d JIS</p>	1)	10, 11	000A, 000B
	2)	18 to 21	0012 to 0015
	3)	2, 3	0002, 0003
	4)	0	0000
	5)	35	0023
	6)	1	0001
	7)	-	-
	8)	34	0022
	9)	36	0024
 <p>1) WDT Error</p> <p>READY</p> <p>Error Detection</p> <p>CH1 Disconnected</p> <p>CH2 Disconnected</p>	1)	-	-
	-	-	-
 <p>1) Temperature</p> <p>2) Disabled/Enabled 21 0000000010011010</p> <p>3) Conversion 21 0000000000000001</p> <p>4) Average/Sample 21 0000001111101000</p> <p>5) WDT Error Error Code: 100</p> <p>Temp. Sensor Type 0 0: New JIS, DIN 1: 01d JIS</p>	1)	10, 11	000A, 000B
	2)	0	0000
	3)	35	0023
	4)	1	0001
	5)	-	-
	6)	34	0022
	7)	36	0024
	-	-	-

6.5.23 A1SJ71PT32-S3 module monitoring

Refer to the following for further information about the screen for A1SJ71PT32-S3 and the buffer memory address.



6.5.17 AJ71PT32-S3 module monitoring

6.5.24 A1S63ADA module monitoring

Screen example		No.	Buffer memory address	
			DEC	HEX
<div><div><div>A1S63ADA Operation Monitor Screen</div><div>SET/ Data MONI END</div><div>RESET Chg. MENU</div></div><div><div>Enable 0: Disable 1: Enable A/D Conversion 0: Not Completed 1: Completed</div><div><div>1) CH No. Setting</div><div>321</div><div>CH Set</div><div>21</div><div>0000000010011010</div><div>0000001001011000</div></div><div><div>Sample/Average</div><div>Time/Count</div><div>Sample/Average</div><div>Count/Time</div></div><div><div>3) CH No. Setting</div><div>21</div><div>0: Sampling</div><div>0: Count Average</div><div>0000001111101000</div><div>1: Averaging</div><div>1: Time Average</div></div><div><div>Time/Count Value</div><div>Input Status [%] Resolution 1</div><div>Input Status [%] Resolution 2</div><div>Input Status [%] Resolution 3</div></div><div><div>4) CH 1</div><div>0</div><div>3.0</div><div>1.5</div><div>1.0</div><div>CH 2</div><div>1</div><div>3.0</div><div>1.5</div><div>1.0</div></div><div><div>Upper Limit</div><div>Lower Limit</div><div>Digital Value</div><div>Simple Loop Control</div></div><div><div>6) CH 3</div><div>1000</div><div>7)1000</div><div>8)1000</div><div>9)1000</div></div><div><div>Error Code 500</div><div>Resolution Setting 0 [1:1/4000,2:1/8000,3:1/12000]</div></div></div></div> <div><div>10)</div><div>11)</div></div>		1)	0	0000
		2)	15	000F
		3)	1	0001
		4)	2, 3	0002, 0003
		5)	11, 12	000B, 000C
		6)	4	0004
		7)	5	0005
		8)	10	000A
		9)	13	000D
		10)	16	0010
		11)	14	000E
		-	-	-

<div><div><div>A1S63ADA Simple Loop Control Monitor Screen</div><div>SET/ Data MONI END</div><div>RESET Chg. MENU</div></div><div><div>Exec.Enable 0: Disabled 1: Enabled</div><div>Y11</div><div>0</div><div>Point</div><div>Channel 1 Coordinate</div><div>Channel 3 Coordinate</div></div><div><div>Control Mode 0</div><div>0: Normal</div><div>1: $y = AX1 + BX2 + C$</div><div>2: $y = \frac{AX1}{X2} + C$</div><div>3: Coordinate Designation</div></div><div><div>A, B, C : Constant</div><div>y : CH3 D/A Digital Value</div><div>X1 : CH1 A/D Digital Value</div><div>X2 : CH2 A/D Digital Value</div></div><div><div>Constant A 1.00</div><div>Constant B 1.00</div><div>Constant C 0</div><div>Number of Points 00</div></div><div><div>Error Code 500</div><div>Resolution Setting 0 [1:1/4000,2:1/8000,3:1/12000]</div></div></div> <div><div>7)</div><div>8)</div></div>		1)	-	-
		2)	6	0006
		3)	7, 8, 9	0007, 0008, 0009
		4)	18 to 37	0012 to 0025
		5)		
		6)	17	0011
		7)	16	0010
		8)	14	000E
		-	-	-

<div><div><div>A1S63ADA Input/Output Monitor Screen</div><div>SET/ Data MONI END</div><div>RESET Chg. MENU</div></div><div><div>Inputs (X)</div><div>Outputs (Y)</div></div><div><div>00 WDT Error</div><div>01 Conversion READY</div><div>02 Error Detection</div><div>03 CH3 Up Limit</div><div>04 CH3 Low Limit</div><div>05 Loop Control</div><div>06</div><div>07</div><div>08 Resolution</div><div>09 Resolution</div><div>0A CH1 Volt./Current</div><div>0B CH2 Volt./Current</div><div>0C CH3 Volt./Current</div><div>0D</div><div>0E</div><div>0F</div></div><div><div>10 CH3 Output</div><div>11 Loop Control</div><div>12 Error Reset</div><div>13 CH3 Unlimited</div><div>14</div><div>15</div><div>16</div><div>17</div><div>18 Resol. Selection</div><div>19 Resol. Selection</div><div>1A CH1 Volt./Current</div><div>1B CH2 Volt./Current</div><div>1C CH3 Volt./Current</div><div>1D Offset/Gain Set.</div><div>1E</div><div>1F</div></div></div> <div><div>1)</div><div>-</div></div>		1)	-	-
		-	-	-

6.5.25 AD75P/A1SD75P module monitoring

Screen example		Buffer memory address					
No.	Axis 1		Axis 2		Axis 3		
	DEC	HEX	DEC	HEX	DEC	HEX	
1)	800	0320	900	0384	1000	03E8	
	801	0321	901	0385	1001	03E9	
2)	812	032C	912	0390	1012	03F4	
	813	032D	913	0391	1013	03F5	
3)	809	0329	909	038D	1009	03F1	
4)	807	0327	907	038B	1007	03EF	
5)	808	0328	908	038C	1008	03F0	
6)	806	0326	906	038A	1006	03EE	
7)	829	033D	929	03A1	1029	0405	
8)							
9)							
10)							
11)							
-	-	-	-	-	-	-	
1)	-	-	-	-	-	-	
-	-	-	-	-	-	-	
1)	0	0000	150	0096	300	012C	
2)	1	0001	151	0097	301	012D	
3)	2	0002	152	0098	302	012E	
4)	3	0003	153	0099	303	012F	
5)	4	0004	154	009A	304	0130	
6)	5	0005	155	009B	305	0131	
-	-	-	-	-	-	-	

AD75P		Operation Monitor Screen			SET/RESET	Data Chg.	MAIN MENU	END
		Axis 1	Axis 2	Axis 3				
Address		1234567890	1234567890	1234567890				
Axis Speed		1234567	1234567	1234567				
Axis Status		Error	Warning	M Code				
#1	Stand By	12	12	1234				
#2	Stand By	4)	5)	1234				
#3	Stand By	12	12	1234				
No.		Pattern	Method	Acc	Dec			
#1	123	Positioning Comp		0	0			
#2	123	Positioning Comp		0	0			
#3	123	Positioning Comp		0	0			
7)		8)	9)	10)	11)			

AD75P I/O Monitor Screen		SET/RESET	Data Chg.	MONI/MENU	END
	X		Y		
00	AD75 Ready	10	10Axis#1 Start		
01	Axis#1 Started	11	11Axis#2 "		
02	Axis#2 "	12	12Axis#3 "		
03	Axis#3 "	13	13Axis#1 Stop		
04	Axis#1 BUSY	14	14Axis#2 "		
05	Axis#2 "	15	15Spar		
06	Axis#3 "	16	16Axis#1 FWD JOG		
07	Axis#1 Completed	17	17Axis#1 RVS		
08	Axis#2 "	18	18Axis#2 FWD "		
09	Axis#3 "	19	19Axis#2 RVS "		
0A	Axis#1 Error	1A	1AAxis#3 FWD "		
0B	Axis#2 "	1B	1BAxis#3 RVS "		
0C	Axis#3 "	1C	1CAxis#3 Stop		
0D	Axis#1 M Code	1D	1DReady		
0E	Axis#2 "	1E	1ENot for use		
0F	Axis#3 "	1F	1FNot for use		

AD75P Basic Parameter 1

1)	Unit	Valid Range	1Axis	2Axis	3Axis
2)	Pulse Per Revolution	1 to 65535 [PLS]	1234	1234	1234
3)	Travel Per Revolution	1 to 65535 [PLS]	1234	1234	1234
4)	Unit Multiplier	1: x1 10: x10	123	123	123
5)	Pulse Output Mode	0: PLS/SIGN Mode 1: CW/CCW Mode 2: A/B Mode(4) 3: A/B Mode(1)	0	0	0
6)	Rotation Direction	0: Forward Pulses 1: Reverse Pulses	0	0	0

Screen example					No.	Buffer memory address					
						Axis 1		Axis 2		Axis 3	
						DEC	HEX	DEC	HEX	DEC	HEX
<div>AD75P Basic Parameter 2</div> <div><div>Parameter</div><div>Valid Range</div><div>1Axis</div><div>2Axis</div><div>3Axis</div></div> <div><div>1)</div><div>Speed Limit</div><div>1 to 600000000 [×10⁻² mm/min] 1 to 600000000 [×10⁻³ inch/min] 1 to 600000000 [×10⁻³ deg/min] 1 to 1000000 [PLS/sec]</div><div>12345678</div><div>12345678</div><div>12345678</div></div> <div><div>2)</div><div>Accel.Time #0</div><div>1 to 65535 /8388608 [msec]</div><div>123456</div><div>123456</div><div>123456</div></div> <div><div>3)</div><div>Decel.Time #0</div><div>1 to 65535 /8388608 [msec]</div><div>123456</div><div>123456</div><div>123456</div></div>					1)	6	0006	156	009C	306	0132
						7	0007	157	009D	307	0133
					2)	8	0008	158	009E	308	0134
						9	0009	159	009F	309	0135
					3)	10	000A	160	00A0	310	0136
						11	000B	161	00A1	311	0137
					-	-	-	-	-	-	-

<div>AD75P Extended Parameter 1</div> <div><div>Parameter</div><div>Valid Range</div><div>Axis1</div><div>Axis2</div><div>Axis3</div></div> <div><div>1)</div><div>Back Lash Compensation</div><div>0 to 65535 [×10⁻¹ μm] [×10⁻⁵ inch] [×10⁻⁵ degree] [PLS] -2147483648 to 2147483647</div><div>123456</div><div>123456</div><div>123456</div></div> <div><div>2)</div><div>Upper S/W Stroke Limit</div><div>0 to 35999999 [×10⁻⁵ degree] [PLS] -2147483648 to 2147483647</div><div>1234567890</div><div>1234567890</div><div>1234567890</div></div> <div><div>3)</div><div>Lower S/W Stroke Limit</div><div>0 to 35999999 [×10⁻⁵ degree] [PLS] -2147483648 to 2147483647</div><div>1234567890</div><div>1234567890</div><div>1234567890</div></div> <div><div>4)</div><div>S/WStrokeLimMode</div><div>0:ValiComman 1:ValiMechan</div><div>0</div><div>1</div><div>1</div></div> <div><div>5)</div><div>S/WStrokeLimit For JOG & MPG</div><div>0:Disabled 1:Enabled</div><div>0</div><div>0</div><div>0</div></div> <div><div>6)</div><div>Torque Limit</div><div>1 to 500 [%]</div><div>123</div><div>123</div><div>123</div></div>					1)	15	000F	165	00A5	315	013B
					2)	16	0010	166	00A6	316	013C
						17	0011	167	00A7	317	013D
					3)	18	0012	168	00A8	318	013E
						19	0013	169	00A9	319	013F
					4)	20	0014	170	00AA	320	0140
					5)	21	0015	171	00AB	321	0141
					6)	24	0018	174	00AE	324	0144
					-	-	-	-	-	-	-

<div>AD75P Extended Parameter 2</div> <div><div>Parameter</div><div>Valid Range</div><div>Axis1</div><div>Axis2</div><div>Axis3</div></div> <div><div>1)</div><div>Accel.Time#1</div><div>1 to 65535 /8388608 [msec]</div><div>123456</div><div>123456</div><div>123456</div></div> <div><div>Accel.Time#2</div><div>1 to 65535 /8388608 [msec]</div><div>123456</div><div>123456</div><div>123456</div></div> <div><div>Accel.Time#3</div><div>1 to 65535 /8388608 [msec]</div><div>123456</div><div>123456</div><div>123456</div></div> <div><div>2)</div><div>Decel.Time#1</div><div>1 to 65535 /8388608 [msec]</div><div>123456</div><div>123456</div><div>123456</div></div> <div><div>Decel.Time#2</div><div>1 to 65535 /8388608 [msec]</div><div>123456</div><div>123456</div><div>123456</div></div> <div><div>Decel.Time#3</div><div>1 to 65535 /8388608 [msec]</div><div>123456</div><div>123456</div><div>123456</div></div>					1)	36 to 41	0024 to 0029	186 to 191	00BA to 00BF	336 to 341	0150 to 0155
					2)	42 to 47	002A to 002F	192 to 197	00C0 to 00C5	342 to 347	0156 to 015B
					-	-	-	-	-	-	-

Screen example		Buffer memory address						
		No.	Axis 1		Axis 2		Axis 3	
			DEC	HEX	DEC	HEX	DEC	HEX
		1)	70	0046	220	00DC	370	0172
		2)	71	0047	221	00DD	371	0173
1)	Method	3)	72	0048	222	00DE	372	0174
		73	0049	223	00DF	373	0175	
2)	Direction	4)	74	004A	224	00E0	374	0176
		75	004B	225	00E1	375	0177	
3)	Address	5)	76	004C	226	00E2	376	0178
		77	004D	227	00E3	377	0179	
6)	Return Speed	6)	78	004E	228	00E4	378	017A
5)	Creep Speed							
6)	Return Retry	-	-	-	-	-	-	-
		1)	79	004F	229	00E5	379	017B
		2)	86	0056	236	00EC	386	0182
1)	OPR Dwell Time	3)	80	0050	230	00E6	380	017C
		81	0051	231	00E7	381	017D	
2)	Torque Limit	4)	82	0052	232	00E8	382	017E
3)	Travel Distance After DOG	5)	83	0053	233	00E9	383	017F
		84	0054	234	00EA	384	0180	
4)	OPR Accel.Time	6)	85	0055	235	00EB	385	0181
5)	OPR Decel.Time							
6)	OP Distance From Zero	-	-	-	-	-	-	-
		1)	816	0330	916	0394	1016	03F8
		2)	817	0331	917	0395	1017	03F9

Screen example		Buffer memory address					
No.	Axis 1		Axis 2		Axis 3		
	DEC	HEX	DEC	HEX	DEC	HEX	
1)	822	0336	922	039A	1022	03FE	
	823	0337	923	039B	1023	03FF	
2)	824	0338	924	039C	1024	0400	
	825	0339	925	039D	1025	0401	
3)	826	033A	926	039E	1026	0402	
4)							
5)							
6)	816	0330	916	0394	1016	03F8	
7)							
-	-	-	-	-	-	-	
1)	832	0340	932	03A4	1032	0408	
	827	033B	927	039F	1027	0403	
	828	033C	928	03A0	1028	0404	
	829	033D	929	03A1	1029	0405	
2)	1160	0488	1210	04BA	1260	04EC	
	1161	0489	1211	04BB	1261	04ED	
3)	1168	0490	1218	04C2	1268	04F4	
	1169	0491	1219	04C3	1269	04F5	
4)	1167	048F	1217	04C1	1267	04F3	
-	-	-	-	-	-	-	
1)	814	032E	914	0392	1014	03F6	
	815	032F	915	0393	1015	03F7	
2)	1164	048C	1214	04BE	1264	04F0	
	1165	048D	1215	04BF	1265	04F1	
3)	817	0331	917	0395	1017	03F9	
4)	1163	048B	1213	04BD	1263	04EF	
5)	817	0331	917	0395	1017	03F9	
-	-	-	-	-	-	-	

Screen example

AD75P Error History, Warning History

[Error History]				[Warning History]			
No.	Ax.	Code	Time	No.	Ax.	Code	Time
1	1	0	00:00:00.00	1	0	0	00:00:00.00
2	2	0	00:00:00.00	2	0	0	00:00:00.00
3	3	0	00:00:00.00	3	0	0	00:00:00.00
4	4	0	00:00:00.00	4	0	0	00:00:00.00
5	5	0	00:00:00.00	5	0	0	00:00:00.00
6	6	0	00:00:00.00	6	0	0	00:00:00.00
7	7	0	00:00:00.00	7	0	0	00:00:00.00
8	8	0	00:00:00.00	8	0	0	00:00:00.00
9	9	0	00:00:00.00	9	0	0	00:00:00.00
10	10	0	00:00:00.00	10	0	0	00:00:00.00
11	11	0	00:00:00.00	11	0	0	00:00:00.00
12	12	0	00:00:00.00	12	0	0	00:00:00.00
13	13	0	00:00:00.00	13	0	0	00:00:00.00
14	14	0	00:00:00.00	14	0	0	00:00:00.00
15	15	0	00:00:00.00	15	0	0	00:00:00.00
16	16	0	00:00:00.00	16	0	0	00:00:00.00

1)

2)

AD75P Start Error, Start History

SET/RESET Data Chg. MONITOR END

[Start Error History]

[Start History]

No.	Ax.	Start	Mode	Time	Res.	No.	Ax.	Start	Mode	Time	Res.
1	1	00	0	00:00:00.00	0	1	1	00	0	00:00:00.00	0
2	2	00	0	00:00:00.00	0	2	2	00	0	00:00:00.00	0
3	3	00	0	00:00:00.00	0	3	3	00	0	00:00:00.00	0
4	4	00	0	00:00:00.00	0	4	4	00	0	00:00:00.00	0
5	5	00	0	00:00:00.00	0	5	5	00	0	00:00:00.00	0
6	6	00	0	00:00:00.00	0	6	6	00	0	00:00:00.00	0
7	7	00	0	00:00:00.00	0	7	7	00	0	00:00:00.00	0
8	8	00	0	00:00:00.00	0	8	8	00	0	00:00:00.00	0
9	9	00	0	00:00:00.00	0	9	9	00	0	00:00:00.00	0
10	10	00	0	00:00:00.00	0	10	10	00	0	00:00:00.00	0
11	11	00	0	00:00:00.00	0	11	11	00	0	00:00:00.00	0
12	12	00	0	00:00:00.00	0	12	12	00	0	00:00:00.00	0
13	13	00	0	00:00:00.00	0	13	13	00	0	00:00:00.00	0
14	14	00	0	00:00:00.00	0	14	14	00	0	00:00:00.00	0
15	15	00	0	00:00:00.00	0	15	15	00	0	00:00:00.00	0
16	16	00	0	00:00:00.00	0	16	16	00	0	00:00:00.00	0

1)

2)

AD75P Positioning Information Monitor Screen

	No.	Pat	Me	thod	△	▽	Address	Arc	Speed	Dwell	M	Code
1)	Ax	1	00	0	0	0	0	0	0	0	0	0
		2	00	0	0	0	0	0	0	0	0	0
		3	00	0	0	0	0	0	0	0	0	0
		4	00	0	0	0	0	0	0	0	0	0
		5	00	0	0	0	0	0	0	0	0	0
2)	Ax	1	00	0	0	0	0	0	0	0	0	0
		2	00	0	0	0	0	0	0	0	0	0
		3	00	0	0	0	0	0	0	0	0	0
		4	00	0	0	0	0	0	0	0	0	0
		5	00	0	0	0	0	0	0	0	0	0
3)	Ax	1	00	0	0	0	0	0	0	0	0	0
		2	00	0	0	0	0	0	0	0	0	0
		3	00	0	0	0	0	0	0	0	0	0
		4	00	0	0	0	0	0	0	0	0	0
		5	00	0	0	0	0	0	0	0	0	0

No.	Buffer memory address					
	Axis 1		Axis 2		Axis 3	
	DEC	HEX	DEC	HEX	DEC	HEX
1)	624 to 687	0270 to 02AF	624 to 687	0270 to 02AF	624 to 687	0270 to 02AF
2)	689 to 752	02B1 to 02F0	689 to 752	02B1 to 02F0	689 to 752	02B1 to 02F0
-	-	-	-	-	-	-
1)	543 to 622	021F to 026E	543 to 622	021F to 026E	543 to 622	021F to 026E
2)	462 to 541	01CE to 021D	462 to 541	01CE to 021D	462 to 541	01CE to 021D
-	-	-	-	-	-	-
1)	1300	0514	2300	08FC	3300	0CE4
2)	to	to	to	to	to	to
3)	2299	08FB	3299	0CE3	4299	10CB
-	-	-	-	-	-	-

6.5.26 AJ71ID1(ID2)-R4/A1SJ71ID1(ID2)-R4 module monitoring

Screen example		No.	Buffer memory address			
			X axis		Y axis	
			DEC	HEX	DEC	HEX
		1)	-	-	-	-
		1)	0	0000	4000	0FA0
		2)	1	0001	4001	0FA1
			2	0002	4002	0FA2
		3)	8	0008	4008	0FA8
		4)	22	0016	4022	0FB6
			23	0017	4023	0FB7
		5)	4	0004	4004	0FA4
			5	0005	4005	0FA5
		6)	-	-	4010	0FAA
		7)	12	000C	4012	0FAC
		8)	14 to 18	000E to 0012	4014 to 4018	0FAE to 0FB2
			-	-	-	-
			-	-	-	-
		1)	100 to 163	0064 to 00A3	4100 to 4163	1004 to 1043
		-	-	-	-	-

6.5.27 A1S68DAV module monitoring

Screen example	No.	Buffer memory address	
		DEC	HEX
 <p>1) points to the 'Analog Output' status indicator (00000001).</p>	1)	0	0000
	2)	1 to 8	0001 to 0008
	3)	10 to 17	000A to 0011
	4)	10 to 17	000A to 0011
 <p>1) points to the 'Error Detect' status indicator (00).</p>	1)	-	-
	-	-	-
 <p>1) points to the 'Output [%]' bar chart.</p> <p>2) points to the 'Analog Output' status indicator (00000001).</p> <p>3) points to the 'Error' status indicator (red square).</p>	1)	1 to 8	0001 to 0008
	2)	0	0000
	3)	-	-
	-	-	-

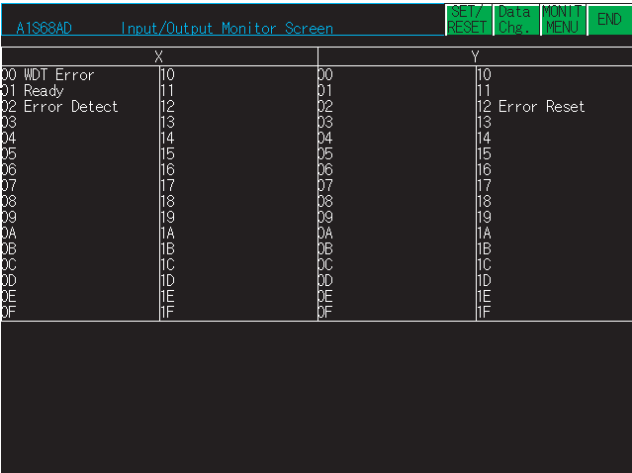
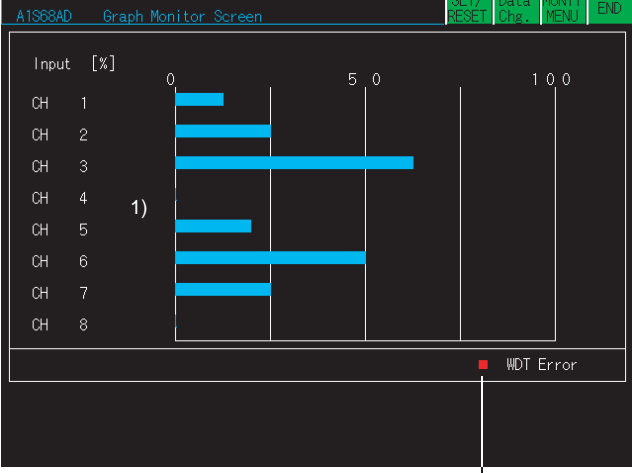
6.5.28 A1S68DAI module monitoring

Refer to the following for further information about the screen for A1S68DAI and the buffer memory address.



6.5.27 A1S68DAV module monitoring

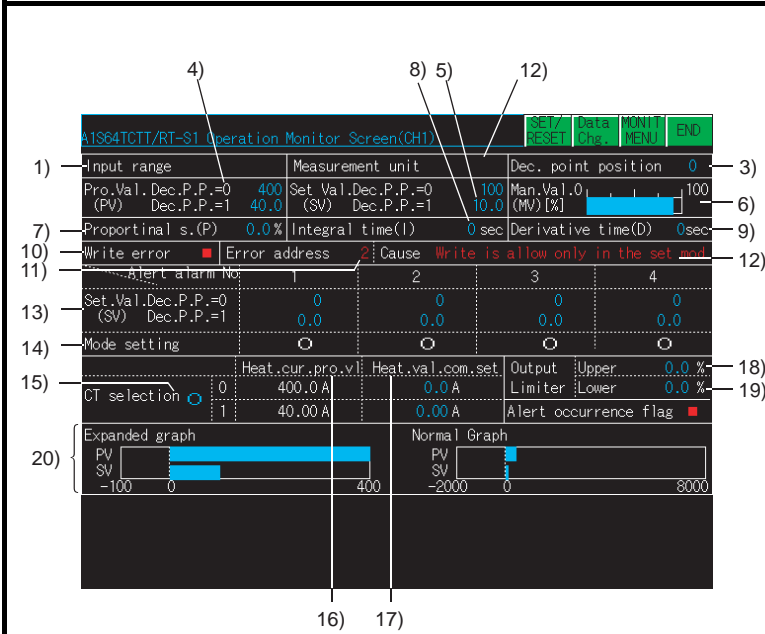
6.5.29 A1S68AD module monitoring

Screen example	No.	Buffer memory address	
		DEC	HEX
 <p>1) A/D Conversion</p> <p>2) A/D Method</p> <p>3) Averaging</p> <p>4) A/D Conversion</p> <p>5) Averaging Time/Number</p> <p>6) Input Status [%]</p> <p>7) Error Code</p>	1)	0	0000
	2)	2	0002
	3)	2	0002
	4)	28	001C
	5)	10 to 17	000A to 0011
	6)	20 to 27	0014 to 001B
	7)	1	0001
 <p>1) WDT Error</p>	1)	-	-
	-	-	-
 <p>1) WDT Error</p> <p>2)</p>	1)	20 to 27	0014 to 001B
	2)	-	-
-	-	-	-

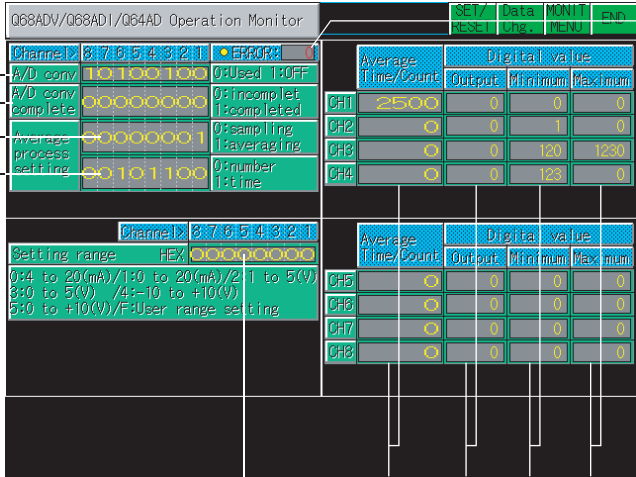
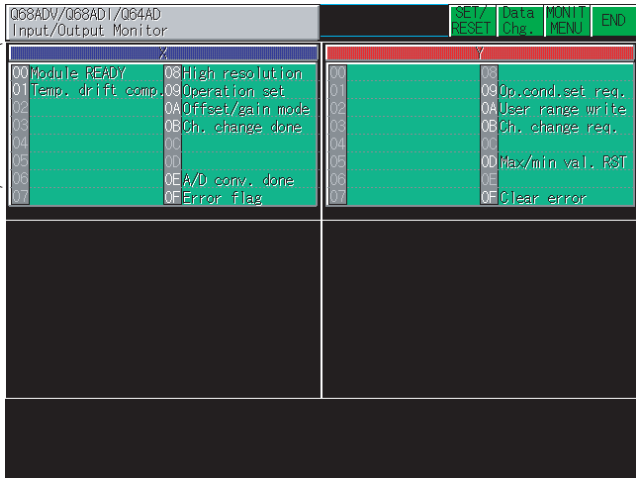
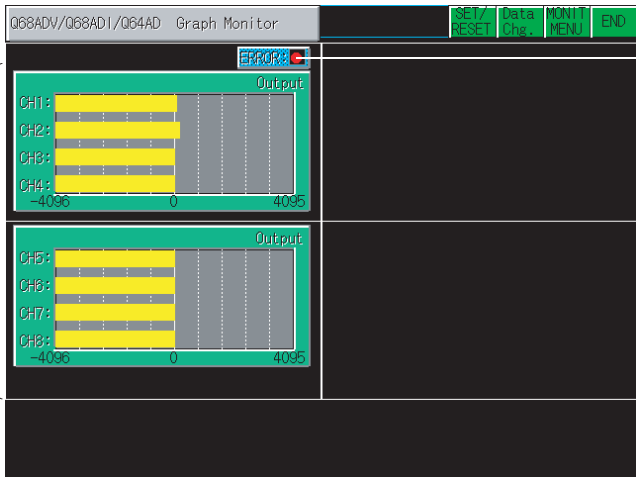
6.5.30 A1S64TCTT(BW)/A1S64TCRT(BW)-S1 monitoring

Screen example		No.	Buffer memory address							
			CH1		CH2		CH3		CH4	
			DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX
		1)	32	0020	64	0040	96	0060	128	0080
		2)	32	0020	64	0040	96	0060	128	0080
		3)	1	0001	2	0002	3	0003	4	0004
		4)	9	0009	10	000A	11	000B	12	000C
		5)	34	0022	66	0042	98	0062	130	0082
		6)	13	000D	14	000E	15	000F	16	0010
		7)	-	-	-	-	-	-	-	-
		8)	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-

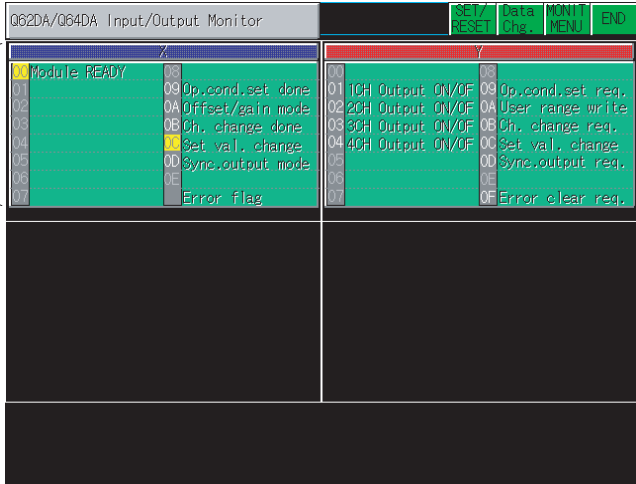
Screen example		Buffer memory address							
No.		CH1		CH2		CH3		CH4	
		DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX
1)		32	0020	64	0040	96	0060	128	0080
2)		32	0020	64	0040	96	0060	128	0080
3)		1	0001	2	0002	3	0003	4	0004
4)		9	0009	10	000A	11	000B	12	000C
5)		34	0022	66	0042	98	0062	130	0082
6)		13	000D	14	000E	15	000F	16	0010
7)		35	0023	67	0043	99	0063	131	0083
8)		36	0024	68	0044	100	0064	132	0084
9)		37	0025	69	0045	101	0065	133	0085
10)		-	-	-	-	-	-	-	-
11)		0	0000	0	0000	0	0000	0	0000
12)		0	0000	0	0000	0	0000	0	0000
13)		38 to 41	0026 to 0029	70 to 73	0046 to 0049	102 to 105	0066 to 0069	134 to 137	0086 to 0089
14)		160 to 163	00A0 to 00A3	160 to 163	00A0 to 00A3	160 to 163	00A0 to 00A3	160 to 163	00A0 to 00A3
15)		57	0039	89	0059	121	0079	153	0099
16)		25	0019	26	001A	27	001B	28	001C
17)		171	00AB	172	00AC	173	00AD	174	00AE
18)		42	002A	74	004A	106	006A	138	008A
		43	002B	75	004B	107	006B	139	008B
19)		-	-	-	-	-	-	-	-
20)		9	0009	10	000A	11	000B	12	0000



6.5.31 Q68ADV/Q68ADI/Q64AD module monitoring

Screen example		No.	Buffer memory address	
			DEC	HEX
		1)	0	0000
		2)	10	000A
		3)	9	0009
		4)	9	0009
		5)	20, 21	0014, 0015
		6)	19	0013
		7)	1 to 8	0001 to 0008
		8)	11 to 18	000B to 0012
		9)	30, 32, 34, 36, 38, 40, 42, 44	001E, 0020, 0022, 0024, 0026, 0028, 002A, 002C
		10)	31, 33, 35, 37, 39, 41, 43, 45	001F, 0021, 0023, 0025, 0027, 0029, 002B, 002D
		-	-	-
		1)	-	-
		-	-	-
		1)	11 to 18	000B to 0012
		2)	-	-
		-	-	-

6.5.32 Q62DA/Q64DA module monitoring

Screen example	No.	Buffer memory address	
		DEC	HEX
	1)	0	0000
	2)	20	0014
	3)	1 to 4	0001 to 0004
	4)	11 to 14	000B to 000E
	5)	19	0013
	1)	-	-
	-	-	-
	1)	11 to 14	000B to 000E
	2)	11 to 14	000B to 000E
	3)	1 to 4	0001 to 0004
	4)	-	-
	-	-	-

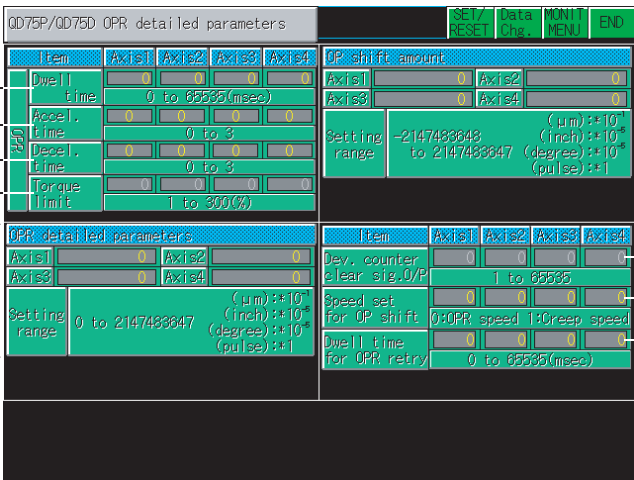
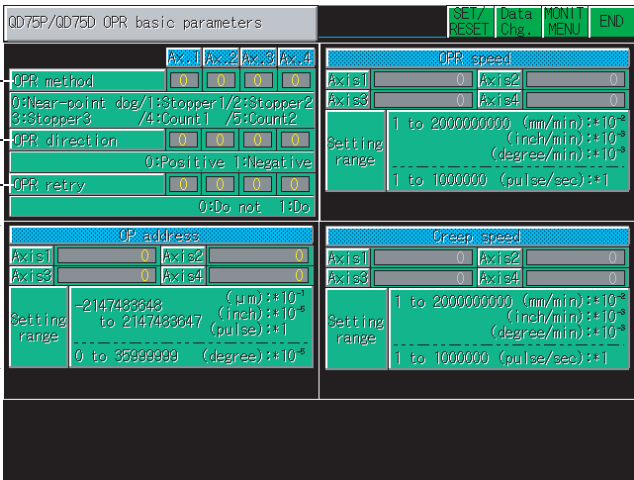
6.5.33 QD62D/QD62E/QD62 module monitoring

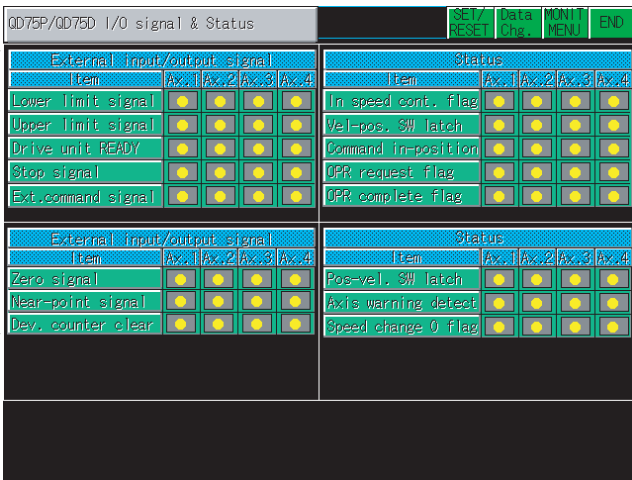
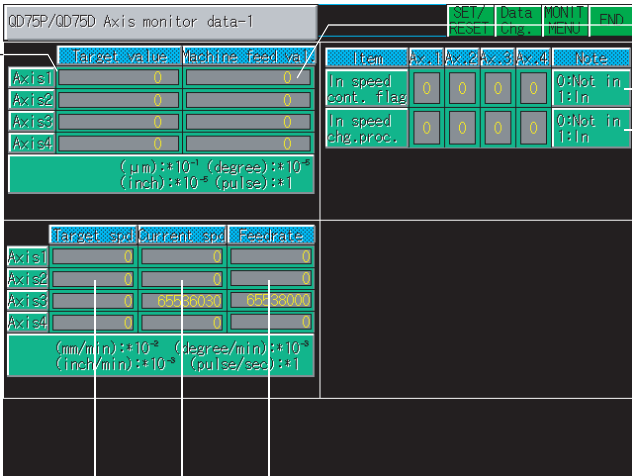
Screen example		No.	Buffer memory address																																																																															
			DEC	HEX																																																																														
<div><div>QD62D/QD62E/QD62 Operation Monitor</div><div><div><div>SET/RESET</div><div>Data Chg.</div><div>MONIT/MENU</div><div>END</div></div><table><thead><tr><th>Item</th><th>Channel 1</th><th>Channel 2</th><th>Overflow detection</th><th>Sampling /periodic</th><th>Counter function</th></tr></thead><tbody><tr><td>1) Set preset val</td><td>163840012</td><td>1</td><td>CH1 No over</td><td>Executing</td><td>Latch</td></tr><tr><td>2) Present value</td><td>0</td><td>80609400</td><td>CH2 No over</td><td>Idling</td><td>Count disable</td></tr><tr><td>3) Equal O/P No.1</td><td>0</td><td>123</td><td></td><td></td><td></td></tr><tr><td>4) Equal O/P No.2</td><td>0</td><td>0</td><td></td><td></td><td></td></tr><tr><td>5) Samp/cycle set</td><td>0*10ms</td><td>0*10ms</td><td></td><td></td><td></td></tr><tr><td>6) Latch count val</td><td>983055</td><td>0</td><td></td><td></td><td></td></tr><tr><td colspan="6"></td></tr><tr><td>7) Samp.count val</td><td>31</td><td>0</td><td></td><td></td><td></td></tr><tr><td>8) pulse</td><td>Was</td><td>0</td><td></td><td></td><td></td></tr><tr><td>9) count</td><td>Now</td><td>65536</td><td></td><td></td><td></td></tr><tr><td>10) Ring count min</td><td>0</td><td>0</td><td></td><td></td><td></td></tr><tr><td>11) Ring count max</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></tbody></table></div><div>12)13)14)</div></div>		Item	Channel 1	Channel 2	Overflow detection	Sampling /periodic	Counter function	1) Set preset val	163840012	1	CH1 No over	Executing	Latch	2) Present value	0	80609400	CH2 No over	Idling	Count disable	3) Equal O/P No.1	0	123				4) Equal O/P No.2	0	0				5) Samp/cycle set	0*10ms	0*10ms				6) Latch count val	983055	0										7) Samp.count val	31	0				8) pulse	Was	0				9) count	Now	65536				10) Ring count min	0	0				11) Ring count max	0	0				1)	00 to 01 32 to 33	0000 to 0001 0020 to 0021
		Item	Channel 1	Channel 2	Overflow detection	Sampling /periodic	Counter function																																																																											
		1) Set preset val	163840012	1	CH1 No over	Executing	Latch																																																																											
		2) Present value	0	80609400	CH2 No over	Idling	Count disable																																																																											
		3) Equal O/P No.1	0	123																																																																														
		4) Equal O/P No.2	0	0																																																																														
		5) Samp/cycle set	0*10ms	0*10ms																																																																														
		6) Latch count val	983055	0																																																																														
		7) Samp.count val	31	0																																																																														
		8) pulse	Was	0																																																																														
		9) count	Now	65536																																																																														
		10) Ring count min	0	0																																																																														
		11) Ring count max	0	0																																																																														
2)	02 to 03 34 to 35	0002 to 0003 0022 to 0023																																																																																
3)	04 to 05 36 to 37	0004 to 0005 0024 to 0025																																																																																
4)	06 to 07 38 to 39	0006 to 0007 0026 to 0027																																																																																
5)	10, 42	000A, 002A																																																																																
6)	12 to 13 44 to 45	000C to 000D 002C to 002D																																																																																
7)	14 to 15 46 to 47	000E to 000F 002E to 002F																																																																																
8)	16 to 17 48 to 49	0010 to 0011 0030 to 0031																																																																																
9)	18 to 19 50 to 51	0012 to 0013 0032 to 0033																																																																																
10)	20 to 21 52 to 53	0014 to 0015 0034 to 0035																																																																																
11)	22 to 23 54 to 55	0016 to 0017 0036 to 0037																																																																																
12)	08, 40	0008, 0028																																																																																
13)	11, 43	000B, 002B																																																																																
14)	09, 41	0009, 0029																																																																																
<div><div>QD62D/QD62E/QD62 Input/Output Monitor</div><div><div><div>SET/RESET</div><div>Data Chg.</div><div>MONIT/MENU</div><div>END</div></div><table><thead><tr><th>X</th><th>Y</th></tr></thead><tbody><tr><td>Module ready</td><td>00 CH1 Coincidence signal No.1 reset</td></tr><tr><td>01 CH1 Counter large(point No.1)</td><td>01 CH1 Preset command</td></tr><tr><td>02 CH1 Counter coincidence(point No.1)</td><td>02 CH1 Coincidence signal enable</td></tr><tr><td>03 CH1 Counter small(point No.1)</td><td>03 CH1 Down count command</td></tr><tr><td>04 CH1 External preset request find</td><td>04 CH1 Count enable command</td></tr><tr><td>05 CH1 Counter large(point No.2)</td><td>05 CH1 External preset detection reset</td></tr><tr><td>06 CH1 Counter coincidence(point No.2)</td><td>06 CH1 Counter function selection start</td></tr><tr><td>07 CH1 Counter small(point No.2)</td><td>07 CH1 Coincidence signal No.2 reset</td></tr><tr><td colspan="2"></td></tr><tr><td>X</td><td>Y</td></tr><tr><td>08 CH2 Counter large(point No.1)</td><td>08 CH2 Coincidence signal No.1 reset</td></tr><tr><td>09 CH2 Counter coincidence(point No.1)</td><td>09 CH2 Preset command</td></tr><tr><td>0A CH2 Counter small(point No.1)</td><td>0A CH2 Coincidence signal enable</td></tr><tr><td>0B CH2 External preset request find</td><td>0B CH2 Down count command</td></tr><tr><td>0C CH2 Counter large(point No.2)</td><td>0C CH2 Count enable command</td></tr><tr><td>0D CH2 Counter coincidence(point No.2)</td><td>0D CH2 External preset detection reset</td></tr><tr><td>0E CH2 Counter small(point No.2)</td><td>0E CH2 Counter function selection start</td></tr><tr><td>0F Fuse broken detection</td><td>0F CH2 Coincidence signal No.2 reset</td></tr></tbody></table></div></div>		X	Y	Module ready	00 CH1 Coincidence signal No.1 reset	01 CH1 Counter large(point No.1)	01 CH1 Preset command	02 CH1 Counter coincidence(point No.1)	02 CH1 Coincidence signal enable	03 CH1 Counter small(point No.1)	03 CH1 Down count command	04 CH1 External preset request find	04 CH1 Count enable command	05 CH1 Counter large(point No.2)	05 CH1 External preset detection reset	06 CH1 Counter coincidence(point No.2)	06 CH1 Counter function selection start	07 CH1 Counter small(point No.2)	07 CH1 Coincidence signal No.2 reset			X	Y	08 CH2 Counter large(point No.1)	08 CH2 Coincidence signal No.1 reset	09 CH2 Counter coincidence(point No.1)	09 CH2 Preset command	0A CH2 Counter small(point No.1)	0A CH2 Coincidence signal enable	0B CH2 External preset request find	0B CH2 Down count command	0C CH2 Counter large(point No.2)	0C CH2 Count enable command	0D CH2 Counter coincidence(point No.2)	0D CH2 External preset detection reset	0E CH2 Counter small(point No.2)	0E CH2 Counter function selection start	0F Fuse broken detection	0F CH2 Coincidence signal No.2 reset	1)	-	-																																								
		X	Y																																																																															
Module ready	00 CH1 Coincidence signal No.1 reset																																																																																	
01 CH1 Counter large(point No.1)	01 CH1 Preset command																																																																																	
02 CH1 Counter coincidence(point No.1)	02 CH1 Coincidence signal enable																																																																																	
03 CH1 Counter small(point No.1)	03 CH1 Down count command																																																																																	
04 CH1 External preset request find	04 CH1 Count enable command																																																																																	
05 CH1 Counter large(point No.2)	05 CH1 External preset detection reset																																																																																	
06 CH1 Counter coincidence(point No.2)	06 CH1 Counter function selection start																																																																																	
07 CH1 Counter small(point No.2)	07 CH1 Coincidence signal No.2 reset																																																																																	
X	Y																																																																																	
08 CH2 Counter large(point No.1)	08 CH2 Coincidence signal No.1 reset																																																																																	
09 CH2 Counter coincidence(point No.1)	09 CH2 Preset command																																																																																	
0A CH2 Counter small(point No.1)	0A CH2 Coincidence signal enable																																																																																	
0B CH2 External preset request find	0B CH2 Down count command																																																																																	
0C CH2 Counter large(point No.2)	0C CH2 Count enable command																																																																																	
0D CH2 Counter coincidence(point No.2)	0D CH2 External preset detection reset																																																																																	
0E CH2 Counter small(point No.2)	0E CH2 Counter function selection start																																																																																	
0F Fuse broken detection	0F CH2 Coincidence signal No.2 reset																																																																																	
	-	-	-																																																																															

6.5.34 QD75P/QD75D module monitoring

Screen example		No.	Buffer memory address					
			DEC	HEX				
<div><div>QD75P/QD75D Operation Monitor</div><div><div><div>1)</div><div>Current feed val.</div><div>Axis feedrate</div></div><div><div>2)</div><div>SET/ Data MONI END</div><div>RESET Chg. MENU</div></div><div><div>3)</div><div>Axis Status</div><div>Standby</div><div>Err.:</div><div>Warning:</div><div>Mode:</div></div><div><div>4)</div><div>Unit</div><div>(mm)*10⁻⁶</div><div>(degree)*10⁻⁶</div><div>(inch)*10⁻⁶</div><div>(pulse)*1</div></div><div><div>5)</div><div>(mm/min)*10⁻⁶</div><div>(degree/min)*10⁻⁶</div><div>(inch/min)*10⁻⁶</div><div>(pulse/sec)*1</div></div><div><div>6)</div><div>Axis Start No.</div><div>1</div><div>2</div><div>3</div><div>4</div></div><div><div>7)</div><div>Operation pattern</div><div>Positioning comp</div><div>Positioning comp</div><div>Positioning comp</div><div>Positioning comp</div></div><div><div>8)</div><div>Control system</div><div>1</div><div>2</div><div>3</div><div>4</div></div><div><div>9)</div><div>Init. time</div><div>1</div><div>0</div><div>0</div><div>0</div></div><div><div>10)</div><div>Acc. time</div><div>1</div><div>0</div><div>0</div><div>0</div></div><div><div>11)</div><div>Dec. time</div><div>1</div><div>0</div><div>0</div><div>0</div></div><div><div>12)</div><div></div><div></div><div></div><div></div></div></div></div>		1)	800 to 801 900 to 901 1000 to 1001 1100 to 1101	0320 to 0321 0384 to 0385 03E8 to 03E9 044C to 044D				
		2)	812 to 813 912 to 913 1012 to 1013 1112 to 1113	032C to 032D 0390 to 0391 03F4 to 03F5 0458 to 0459				
		3)	809, 909, 1009, 1109	0329, 038D, 03F1, 0455				
		4)	806, 906, 1006, 1106	0326, 038A, 03EE, 0452				
		5)	807, 907, 1007, 1107	0327, 038B, 03EF, 0453				
		6)	808, 908, 1008, 1108	0328, 038C, 03F0, 0454				
		7)	829, 929, 1029, 1129	033D, 03A1, 0405, 0469				
		8) to 12)	838, 938, 1038, 1138	0346, 03AA, 040E, 0472				
		<div><div>QD75P/QD75D Input/Output Monitor</div><div><div>1)</div><div>IO/READY</div><div>Synchronization</div><div>Axis1 Error</div><div>Axis2 Error</div><div>Axis3 Error</div><div>Axis4 Error</div><div>Axis1 M code ON</div><div>Axis2 M code ON</div><div>Axis3 M code ON</div><div>Axis4 M code ON</div><div>Axis1 BUSY</div><div>Axis2 BUSY</div><div>Axis3 BUSY</div><div>Axis4 BUSY</div></div><div><div>2)</div><div>PLC READY</div><div>Axis1 FWD JOG</div><div>Axis1 RVS JOG</div><div>Axis2 FWD JOG</div><div>Axis2 RVS JOG</div><div>Axis3 FWD JOG</div><div>Axis3 RVS JOG</div><div>Axis4 FWD JOG</div><div>Axis4 RVS JOG</div></div><div><div>3)</div><div>Axis1 Started</div><div>Axis2 Started</div><div>Axis3 Started</div><div>Axis4 Started</div><div>Axis1 Pos. done</div><div>Axis2 Pos. done</div><div>Axis3 Pos. done</div><div>Axis4 Pos. done</div></div><div><div>4)</div><div>Axis1 Exe prohibit</div><div>Axis2 Exe prohibit</div><div>Axis3 Exe prohibit</div><div>Axis4 Exe prohibit</div></div></div>		1)	-	-		
				-	-	-		
				<div><div>QD75P/QD75D Basic parameters 1</div><div><div>1)</div><div>Unit setting</div><div>2</div><div>0</div><div>0</div><div>0</div></div><div><div>2)</div><div>Pulse output mode</div><div>0:PLS/STN</div><div>1:PLW/ON</div><div>2:A p./B p.(multiple of 4)</div><div>3:A p./B p.(multiple of 1)</div></div><div><div>3)</div><div>Movement amount per pulse</div><div>Item</div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div><div>Pulse/rotation (A)</div><div>1 to 85535(pulse)</div></div><div><div>4)</div><div>Movement amount per rotation(A/D)</div><div>1 to 85535</div><div>0: (mm)</div><div>1: (inch)</div><div>2: (deg)</div><div>3: (pul)</div></div><div><div>5)</div><div>Unit magnification</div><div>1/10/100/1000/10000</div></div><div><div>6)</div><div>Rotation direction setting</div><div>0:Forward run pulse output</div><div>1:Reverse run pulse output</div></div><div><div>7)</div><div>Bias speed at start</div><div>Setting range</div><div>0 to 20000000000 (mm/min)*10⁻⁶</div><div>0 to 20000000000 (inch/min)*10⁻⁶</div><div>0 to 10000000 (pulse/sec)*1</div></div></div>		1)	0, 150, 300, 450	0000, 0096, 012C, 01C2
						2)	4, 154, 304, 454	0004, 009A, 0130, 01C6
3)	1, 151, 301, 451					0001, 0097, 012D, 01C3		
4)	2, 152, 302, 452					0002, 0098, 012E, 01C4		
5)	3, 153, 303, 453					0003, 0099, 012F, 01C5		
6)	5, 155, 305, 455					0005, 009B, 0131, 01C7		
7)	6, 156, 306, 456					0006, 009C, 0132, 01C8		
-	-					-		

Screen example		No.	Buffer memory address					
			DEC	HEX				
<div><div>QD75P/QD75D Basic parameters 2</div><div><div><div>Speed limit value</div><div>Axis1 65536 Axis2 0 Axis3 0 Axis4 0</div><div>setting range 1 to 2000000000 (mm/min)*10⁻³ (inch/min)*10⁻³ (degree/min)*10⁻³ 1 to 1000000 (pulse/sec)*1</div></div><div><div>Deceleration time 0</div><div>Axis1 31 Axis2 0 Axis3 0 Axis4 0</div><div>Setting range 1 to 8888888(msec)</div></div></div><div><div>Acceleration time 0</div><div>Axis1 983055 Axis2 0 Axis3 0 Axis4 0</div><div>Setting range 1 to 8888888(msec)</div></div></div>		1)	10 to 11 160 to 161 310 to 311 460 to 461	000A to 000B 00A0 to 00A1 0136 to 0137 01CC to 01CD				
		2)	12 to 13 162 to 163 312 to 313 462 to 463	000C to 000D 00A2 to 00A3 0138 to 0139 01CE to 01CF				
		3)	14 to 15 164 to 165 314 to 315 464 to 465	000E to 000F 00A4 to 00A5 013A to 013B 01D0 to 01D1				
		-	-	-				
		<div><div>QD75P/QD75D Detailed parameters 1-1</div><div><div><div>Backlash compensation amount</div><div>Axis1 0 Axis2 0 Axis3 0 Axis4 0</div><div>setting range 0 to 65535 (μm)*10⁻³ (inch)*10⁻³ (degree)*10⁻³ (pulse)*1</div></div><div><div>Manual pulse generator input selection</div><div>Axis1 0 Axis2 0 Axis3 0 Axis4 0</div><div>Setting range 0:A-phase/B-phase multiplied by 4 1:A-phase/B-phase multiplied by 2 2:A-phase/B-phase multiplied by 1 3:PLS/316H</div></div></div><div><div>Software stroke upper limit value</div><div>High Limit Axis1 65536 Axis2 0 Axis3 0 Axis4 0</div><div>Low Limit Axis1 0 Axis2 0 Axis3 0 Axis4 0</div><div>Setting range -2147483648 (μm)*10⁻³ (inch)*10⁻³ to 2147483647 (pulse)*1 (degree)*10⁻³</div></div><div><div>Item</div><div>Axis1 Axis2 Axis3 Axis4</div><div>Set Range</div><div>5/4 stroke limit select 0 0 0 0 0:Or feed 1:No feed</div><div>5/4 stroke limit OK/NG setting 0 0 0 0 0: valid 1: invalid</div><div>Torque limit set value 0 0 0 0 1~500 [%]</div></div></div>		1)	17, 167, 317, 467	0011, 00A7, 013D, 01D3		
				2)	18 to 19 168 to 169 318 to 319 468 to 469 20 to 21 170 to 171 320 to 321 470 to 471	0012 to 0013 00A8 to 00A9 013E to 013F 01D4 to 01D5 0014 to 0015 00AA to 00AB 0140 to 0141 01D6 to 01D7		
				3)	33	0021		
				4)	22, 172, 322, 472	0016, 00AC, 0142, 01D8		
				5)	23, 173, 323, 473	0017, 00AD, 0143, 01D9		
				6)	26, 176, 326, 476	001A, 00B0, 0146, 01DC		
				<div><div>QD75P/QD75D Detailed parameters 1-2</div><div><div><div>Item</div><div>Axis1 Axis2 Axis3 Axis4</div><div>Set range</div><div>Mode ON sig 0 0 0 0 0:WITH 1:AFTER</div><div>Q/P timing 0 0 0 0 0:Normal 1:Frontal</div><div>Interpolate speed set method 0 0 0 0 0:Comp. 1:Ref. axis</div></div><div><div>Command in-position width</div><div>Axis1 0 Axis2 0 Axis3 0 Axis4 0</div><div>Setting range 1 to 2147483647 (μm)*10⁻³ (inch)*10⁻³ (degree)*10⁻³ (pulse)*1</div></div></div><div><div>Current feed val during speed control</div><div>Axis1 0 Axis2 0 Axis3 0 Axis4 0</div><div>0:Do Not / 1:Do / 2:Clear(0)</div><div><div>Output signal logic selection</div><div>Item</div><div>Axis1 Axis2 Axis3 Axis4</div><div>Comm. pulse signal Pos. Neg. Neg. Neg.</div><div>Dev. counter clear Neg. Neg. Neg. Neg.</div></div><div><div>Item</div><div>Axis1 Axis2 Axis3 Axis4</div><div>Lower limit Neg. Neg. Neg. Neg.</div><div>Upper limit Neg. Neg. Neg. Neg.</div><div>Drive unit READY Neg. Neg. Neg. Neg.</div><div>Stop signal Neg. Neg. Neg. Neg.</div><div>External command Neg. Neg. Neg. Neg.</div><div>Zero signal Neg. Neg. Neg. Neg.</div><div>Near point dog Neg. Neg. Neg. Neg.</div></div></div></div>		1)	27, 177, 327, 477	001B, 00B1, 0147, 01DD
						2)	28, 178, 328, 478	001C, 00B2, 0148, 01DE
						3)	29, 179, 329, 479	001D, 00B3, 0149, 01DF
4)	24 to 25 174 to 175 324 to 325 474 to 475					0018 to 0019 00AE to 00AF 0144 to 0145 01DA to 01DB		
	5)					30, 180, 330, 480	001E, 00B4, 014A, 01E0	
	6)					32, 182, 332, 482	0020, 00B6, 014C, 01E2	
7)	31, 181, 331, 481					001F, 00B5, 014B, 01E1		

Screen example		No.	Buffer memory address	
			DEC	HEX
		1)	79, 229, 379, 529	004F, 00E5, 017B, 0211
		2)	82, 232, 382, 532	0052, 00E8, 017E, 0214
		3)	83, 233, 383, 533	0053, 00E9, 017F, 0215
		4)	86, 236, 386, 536	0056, 00EC, 0182, 0218
		5)	80 to 81	0050 to 0051
			230 to 231	00E6 to 00E7
			380 to 381	017C to 017D
			530 to 531	0212 to 0213
		6)	84 to 85	0054 to 0055
			234 to 235	00EA to 00EB
			384 to 385	0180 to 0181
			534 to 535	0216 to 0217
		7)	87, 237, 387, 537	0057, 00ED, 0183, 0219
		8)	88, 238, 388, 538	0058, 00EE, 0184, 021A
		9)	89, 239, 389, 539	0059, 00EF, 0185, 021B
		1)	70, 220, 370, 520	0046, 00DC, 0172, 0208
		2)	71, 221, 371, 521	0047, 00DD, 0173, 0209
		3)	78, 228, 378, 528	004E, 00E4, 017A, 0210
		4)	72 to 73	0048 to 0049
			222 to 223	00DE to 00DF
			372 to 373	0174 to 0175
			522 to 523	020A to 020B
		5)	74 to 75	004A to 004B
			224 to 225	00E0 to 00E1
			374 to 375	0176 to 0177
			524 to 525	020C to 020D
		6)	76 to 77	004C to 004D
			226 to 227	00E2 to 00E3
			376 to 377	0178 to 0179
			526 to 527	020E to 020F

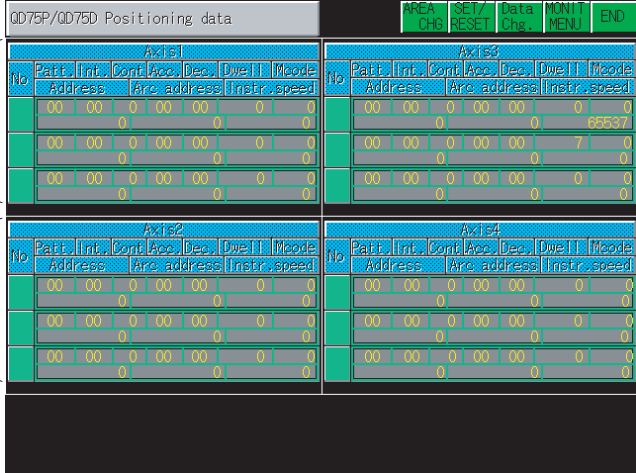
Screen example		No.	Buffer memory address	
			DEC	HEX
		1)	816, 916, 1016, 1116	0330, 0394, 03F8, 045C
		2)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D
		-	-	-
		1)	818 to 819 918 to 919 1018 to 1019 1118 to 1119	0332 to 0333 0396 to 0397 03FA to 03FB 045E to 045F
		2)	802 to 803 902 to 903 1002 to 1003 1102 to 1103	0322 to 0323 0386 to 0387 03EA to 03EB 044E to 044F
		3)	820 to 821 920 to 921 1020 to 1021 1120 to 1121	0334 to 0335 0398 to 0399 03FC to 03FD 0460 to 0461
		4)	810 to 811 910 to 911 1010 to 1011 1110 to 1111	032A to 032B 038E to 038F 03F2 to 03F3 0456 to 0457
		5)	812 to 813 912 to 913 1012 to 1013 1112 to 1113	032C to 032D 0390 to 0391 03F4 to 03F5 0458 to 0459
		6)	830, 930, 1030, 1130	033E, 03A2, 0406, 046A
		7)	831, 931, 1031, 1131	033F, 03A3, 0407, 046B

Screen example		No.	Buffer memory address																																																																																																																																																																																																														
			DEC	HEX																																																																																																																																																																																																													
<div><div>QD75P/QD75D Axis monitor data-2</div><div><div>SET/ Data MONIT END</div><div>RESET Chg. MENU</div></div><div><div>Special start data</div><table><thead><tr><th>Axis</th><th>Instr. code</th><th>Instr. para</th><th>Data No.</th></tr></thead><tbody><tr><td>1</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2</td><td>0</td><td>0</td><td>0</td></tr><tr><td>3</td><td>0</td><td>0</td><td>0</td></tr><tr><td>4</td><td>0</td><td>0</td><td>0</td></tr></tbody></table><div>Special start repetition counter</div><table><thead><tr><th>Axis1</th><th>Axis2</th><th>Axis3</th><th>Axis4</th></tr></thead><tbody><tr><td>0</td><td>0</td><td>0</td><td>0</td></tr></tbody></table><div>Control system repetition counter</div><table><thead><tr><th>Axis1</th><th>Axis2</th><th>Axis3</th><th>Axis4</th></tr></thead><tbody><tr><td>0</td><td>0</td><td>0</td><td>0</td></tr></tbody></table><div>Data being executed</div><table><thead><tr><th>Axis</th><th>1st data counter</th><th>Pos. data number</th><th>Block No.</th><th>Previous position</th></tr></thead><tbody><tr><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>3</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>4</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></tbody></table></div><div>1) 4) 5) 2) 6) 7) 3)</div></div> <tr><td>1)</td><td>827, 927, 1027, 1127</td><td>033B, 039F, 0403, 0467</td></tr> <tr><td>2)</td><td>828, 928, 1028, 1128</td><td>033C, 03A0, 0404, 0468</td></tr> <tr><td>3)</td><td>829, 929, 1029, 1129</td><td>033D, 03A1, 0405, 0469</td></tr> <tr><td>4)</td><td>834, 934, 1034, 1134</td><td>0342, 03A6, 040A, 046E</td></tr> <tr><td>5)</td><td>835, 936, 1036, 1135</td><td>0343, 03A8, 040C, 046F</td></tr> <tr><td>6)</td><td>836, 936, 1036, 1136</td><td>0344, 03A8, 040C, 0470</td></tr> <tr><td>7)</td><td>837, 937, 1037, 1137</td><td>0345, 03A9, 040D, 0471</td></tr> <tr><td>8)</td><td>832, 932, 1032, 1132</td><td>0340, 03A4, 0408, 046C</td></tr> <tr><td>9)</td><td>833, 933, 1033, 1133</td><td>0341, 03A5, 0409, 046D</td></tr> <tr><td>-</td><td>-</td><td>-</td></tr> <tr><td colspan="2" rowspan="6"><div><div>QD75P/QD75D OPR</div><div><div>SET/ Data MONIT END</div><div>RESET Chg. MENU</div></div><div><div>Travel after NPD ON</div><table><thead><tr><th>Axis</th><th></th></tr></thead><tbody><tr><td>1</td><td>0</td></tr><tr><td>2</td><td>0</td></tr><tr><td>3</td><td>0</td></tr><tr><td>4</td><td>0</td></tr></tbody></table><div>(μm:*10⁻¹) (inch:*10⁻²) (degree:*10⁻¹) (pulse:*1⁻¹)</div><div><div>Torque limit</div><table><thead><tr><th>Axis</th><th>Torque limit stored value</th><th>Zero point</th><th>Near point</th><th>Upper limit</th><th>Lower limit</th></tr></thead><tbody><tr><td>1</td><td>123 (%)</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>2</td><td>0 (%)</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>3</td><td>383 (%)</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>4</td><td>0 (%)</td><td>●</td><td>●</td><td>●</td><td>●</td></tr></tbody></table></div></div><div>2) 3) 4) 5) 6)</div></div><tr><td>1)</td><td>824 to 825 924 to 925 1024 to 1025 1124 to 1125</td><td>0338 to 0339 039C to 039D 0400 to 0401 0464 to 0465</td></tr><tr><td>2)</td><td>826, 926, 1026, 1126</td><td>033A, 039E, 0402, 0466</td></tr><tr><td>3)</td><td rowspan="3">816, 916, 1016, 1116</td><td rowspan="3">0330, 0394, 03F8, 045C</td></tr><tr><td>4)</td></tr><tr><td>5)</td></tr><tr><td>6)</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td colspan="2" rowspan="11"><div><div>QD75P/QD75D Speed-position control</div><div><div>SET/ Data MONIT END</div><div>RESET Chg. MENU</div></div><div><div>SPSP positioning amount</div><table><thead><tr><th>Axis</th><th></th></tr></thead><tbody><tr><td>Axis1</td><td>0</td></tr><tr><td>Axis2</td><td>0</td></tr><tr><td>Axis3</td><td>1500</td></tr><tr><td>Axis4</td><td>0</td></tr></tbody></table><div>(μm):*10⁻¹ (degree):*10⁻¹ (inch):*10⁻² (pulse):*1</div><div><div>SPSP movement amount change register</div><table><thead><tr><th>Axis</th><th></th></tr></thead><tbody><tr><td>Axis1</td><td>0</td></tr><tr><td>Axis2</td><td>0</td></tr><tr><td>Axis3</td><td>0</td></tr><tr><td>Axis4</td><td>0</td></tr></tbody></table><div>Setting range 0 to 2147483647 (μm):*10⁻¹ (inch):*10⁻² (degree):*10⁻¹ (pulse):*1</div></div><div><div>Item</div><table><thead><tr><th></th><th>Axis1</th><th>Axis2</th><th>Axis3</th><th>Axis4</th></tr></thead><tbody><tr><td>Speed-position switching latch</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>Lin speed control</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>Speed-position switching enable</td><td>0:Disable</td><td>1:Enable</td><td>0:Disable</td><td>1:Enable</td></tr></tbody></table></div></div><div>1) 3) 4) 5)</div></div><tr><td>1)</td><td>814 to 815 914 to 915 1014 to 1015 1114 to 1115</td><td>032E to 032F 0392 to 0393 03F6 to 03F7 045A to 045B</td></tr><tr><td rowspan="4">2)</td><td>1526 to 1527 1626 to 1627 1726 to 1727 1826 to 1827</td><td>05F6 to 05F7 065A to 065B 06BE to 06BF 0722 to 0723</td></tr><tr><td>3)</td><td>817, 917, 1017, 1117</td><td>0331, 0395, 03F9, 045D</td></tr><tr><td>4)</td><td>817, 917, 1017, 1117</td><td>0331, 0395, 03F9, 045D</td></tr><tr><td>5)</td><td>1528, 1628, 1728, 1828</td><td>05F8, 065C, 06C0, 0724</td></tr><tr><td>-</td><td>-</td><td>-</td></tr></td></tr></td></tr>		Axis	Instr. code	Instr. para	Data No.	1	0	0	0	2	0	0	0	3	0	0	0	4	0	0	0	Axis1	Axis2	Axis3	Axis4	0	0	0	0	Axis1	Axis2	Axis3	Axis4	0	0	0	0	Axis	1st data counter	Pos. data number	Block No.	Previous position	1	0	0	0	0	2	0	0	0	0	3	0	0	0	0	4	0	0	0	0	1)	827, 927, 1027, 1127	033B, 039F, 0403, 0467	2)	828, 928, 1028, 1128	033C, 03A0, 0404, 0468	3)	829, 929, 1029, 1129	033D, 03A1, 0405, 0469	4)	834, 934, 1034, 1134	0342, 03A6, 040A, 046E	5)	835, 936, 1036, 1135	0343, 03A8, 040C, 046F	6)	836, 936, 1036, 1136	0344, 03A8, 040C, 0470	7)	837, 937, 1037, 1137	0345, 03A9, 040D, 0471	8)	832, 932, 1032, 1132	0340, 03A4, 0408, 046C	9)	833, 933, 1033, 1133	0341, 03A5, 0409, 046D	-	-	-	<div><div>QD75P/QD75D OPR</div><div><div>SET/ Data MONIT END</div><div>RESET Chg. MENU</div></div><div><div>Travel after NPD ON</div><table><thead><tr><th>Axis</th><th></th></tr></thead><tbody><tr><td>1</td><td>0</td></tr><tr><td>2</td><td>0</td></tr><tr><td>3</td><td>0</td></tr><tr><td>4</td><td>0</td></tr></tbody></table><div>(μm:*10⁻¹) (inch:*10⁻²) (degree:*10⁻¹) (pulse:*1⁻¹)</div><div><div>Torque limit</div><table><thead><tr><th>Axis</th><th>Torque limit stored value</th><th>Zero point</th><th>Near point</th><th>Upper limit</th><th>Lower limit</th></tr></thead><tbody><tr><td>1</td><td>123 (%)</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>2</td><td>0 (%)</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>3</td><td>383 (%)</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>4</td><td>0 (%)</td><td>●</td><td>●</td><td>●</td><td>●</td></tr></tbody></table></div></div><div>2) 3) 4) 5) 6)</div></div> <tr><td>1)</td><td>824 to 825 924 to 925 1024 to 1025 1124 to 1125</td><td>0338 to 0339 039C to 039D 0400 to 0401 0464 to 0465</td></tr> <tr><td>2)</td><td>826, 926, 1026, 1126</td><td>033A, 039E, 0402, 0466</td></tr> <tr><td>3)</td><td rowspan="3">816, 916, 1016, 1116</td><td rowspan="3">0330, 0394, 03F8, 045C</td></tr> <tr><td>4)</td></tr> <tr><td>5)</td></tr> <tr><td>6)</td></tr> <tr><td>-</td><td>-</td><td>-</td></tr> <tr><td colspan="2" rowspan="11"><div><div>QD75P/QD75D Speed-position control</div><div><div>SET/ Data MONIT END</div><div>RESET Chg. MENU</div></div><div><div>SPSP positioning amount</div><table><thead><tr><th>Axis</th><th></th></tr></thead><tbody><tr><td>Axis1</td><td>0</td></tr><tr><td>Axis2</td><td>0</td></tr><tr><td>Axis3</td><td>1500</td></tr><tr><td>Axis4</td><td>0</td></tr></tbody></table><div>(μm):*10⁻¹ (degree):*10⁻¹ (inch):*10⁻² (pulse):*1</div><div><div>SPSP movement amount change register</div><table><thead><tr><th>Axis</th><th></th></tr></thead><tbody><tr><td>Axis1</td><td>0</td></tr><tr><td>Axis2</td><td>0</td></tr><tr><td>Axis3</td><td>0</td></tr><tr><td>Axis4</td><td>0</td></tr></tbody></table><div>Setting range 0 to 2147483647 (μm):*10⁻¹ (inch):*10⁻² (degree):*10⁻¹ (pulse):*1</div></div><div><div>Item</div><table><thead><tr><th></th><th>Axis1</th><th>Axis2</th><th>Axis3</th><th>Axis4</th></tr></thead><tbody><tr><td>Speed-position switching latch</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>Lin speed control</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>Speed-position switching enable</td><td>0:Disable</td><td>1:Enable</td><td>0:Disable</td><td>1:Enable</td></tr></tbody></table></div></div><div>1) 3) 4) 5)</div></div><tr><td>1)</td><td>814 to 815 914 to 915 1014 to 1015 1114 to 1115</td><td>032E to 032F 0392 to 0393 03F6 to 03F7 045A to 045B</td></tr><tr><td rowspan="4">2)</td><td>1526 to 1527 1626 to 1627 1726 to 1727 1826 to 1827</td><td>05F6 to 05F7 065A to 065B 06BE to 06BF 0722 to 0723</td></tr><tr><td>3)</td><td>817, 917, 1017, 1117</td><td>0331, 0395, 03F9, 045D</td></tr><tr><td>4)</td><td>817, 917, 1017, 1117</td><td>0331, 0395, 03F9, 045D</td></tr><tr><td>5)</td><td>1528, 1628, 1728, 1828</td><td>05F8, 065C, 06C0, 0724</td></tr><tr><td>-</td><td>-</td><td>-</td></tr></td></tr>		Axis		1	0	2	0	3	0	4	0	Axis	Torque limit stored value	Zero point	Near point	Upper limit	Lower limit	1	123 (%)	●	●	●	●	2	0 (%)	●	●	●	●	3	383 (%)	●	●	●	●	4	0 (%)	●	●	●	●	1)	824 to 825 924 to 925 1024 to 1025 1124 to 1125	0338 to 0339 039C to 039D 0400 to 0401 0464 to 0465	2)	826, 926, 1026, 1126	033A, 039E, 0402, 0466	3)	816, 916, 1016, 1116	0330, 0394, 03F8, 045C	4)	5)	6)	-	-	-	<div><div>QD75P/QD75D Speed-position control</div><div><div>SET/ Data MONIT END</div><div>RESET Chg. MENU</div></div><div><div>SPSP positioning amount</div><table><thead><tr><th>Axis</th><th></th></tr></thead><tbody><tr><td>Axis1</td><td>0</td></tr><tr><td>Axis2</td><td>0</td></tr><tr><td>Axis3</td><td>1500</td></tr><tr><td>Axis4</td><td>0</td></tr></tbody></table><div>(μm):*10⁻¹ (degree):*10⁻¹ (inch):*10⁻² (pulse):*1</div><div><div>SPSP movement amount change register</div><table><thead><tr><th>Axis</th><th></th></tr></thead><tbody><tr><td>Axis1</td><td>0</td></tr><tr><td>Axis2</td><td>0</td></tr><tr><td>Axis3</td><td>0</td></tr><tr><td>Axis4</td><td>0</td></tr></tbody></table><div>Setting range 0 to 2147483647 (μm):*10⁻¹ (inch):*10⁻² (degree):*10⁻¹ (pulse):*1</div></div><div><div>Item</div><table><thead><tr><th></th><th>Axis1</th><th>Axis2</th><th>Axis3</th><th>Axis4</th></tr></thead><tbody><tr><td>Speed-position switching latch</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>Lin speed control</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>Speed-position switching enable</td><td>0:Disable</td><td>1:Enable</td><td>0:Disable</td><td>1:Enable</td></tr></tbody></table></div></div><div>1) 3) 4) 5)</div></div> <tr><td>1)</td><td>814 to 815 914 to 915 1014 to 1015 1114 to 1115</td><td>032E to 032F 0392 to 0393 03F6 to 03F7 045A to 045B</td></tr> <tr><td rowspan="4">2)</td><td>1526 to 1527 1626 to 1627 1726 to 1727 1826 to 1827</td><td>05F6 to 05F7 065A to 065B 06BE to 06BF 0722 to 0723</td></tr> <tr><td>3)</td><td>817, 917, 1017, 1117</td><td>0331, 0395, 03F9, 045D</td></tr> <tr><td>4)</td><td>817, 917, 1017, 1117</td><td>0331, 0395, 03F9, 045D</td></tr> <tr><td>5)</td><td>1528, 1628, 1728, 1828</td><td>05F8, 065C, 06C0, 0724</td></tr> <tr><td>-</td><td>-</td><td>-</td></tr>		Axis		Axis1	0	Axis2	0	Axis3	1500	Axis4	0	Axis		Axis1	0	Axis2	0	Axis3	0	Axis4	0		Axis1	Axis2	Axis3	Axis4	Speed-position switching latch	●	●	●	●	Lin speed control	●	●	●	●	Speed-position switching enable	0:Disable	1:Enable	0:Disable	1:Enable	1)	814 to 815 914 to 915 1014 to 1015 1114 to 1115	032E to 032F 0392 to 0393 03F6 to 03F7 045A to 045B	2)	1526 to 1527 1626 to 1627 1726 to 1727 1826 to 1827	05F6 to 05F7 065A to 065B 06BE to 06BF 0722 to 0723	3)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D	4)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D	5)	1528, 1628, 1728, 1828	05F8, 065C, 06C0, 0724	-	-	-
		Axis	Instr. code	Instr. para	Data No.																																																																																																																																																																																																												
		1	0	0	0																																																																																																																																																																																																												
		2	0	0	0																																																																																																																																																																																																												
		3	0	0	0																																																																																																																																																																																																												
		4	0	0	0																																																																																																																																																																																																												
		Axis1	Axis2	Axis3	Axis4																																																																																																																																																																																																												
		0	0	0	0																																																																																																																																																																																																												
		Axis1	Axis2	Axis3	Axis4																																																																																																																																																																																																												
0	0	0	0																																																																																																																																																																																																														
Axis	1st data counter	Pos. data number	Block No.	Previous position																																																																																																																																																																																																													
1	0	0	0	0																																																																																																																																																																																																													
2	0	0	0	0																																																																																																																																																																																																													
3	0	0	0	0																																																																																																																																																																																																													
4	0	0	0	0																																																																																																																																																																																																													
1)	827, 927, 1027, 1127	033B, 039F, 0403, 0467																																																																																																																																																																																																															
2)	828, 928, 1028, 1128	033C, 03A0, 0404, 0468																																																																																																																																																																																																															
3)	829, 929, 1029, 1129	033D, 03A1, 0405, 0469																																																																																																																																																																																																															
4)	834, 934, 1034, 1134	0342, 03A6, 040A, 046E																																																																																																																																																																																																															
5)	835, 936, 1036, 1135	0343, 03A8, 040C, 046F																																																																																																																																																																																																															
6)	836, 936, 1036, 1136	0344, 03A8, 040C, 0470																																																																																																																																																																																																															
7)	837, 937, 1037, 1137	0345, 03A9, 040D, 0471																																																																																																																																																																																																															
8)	832, 932, 1032, 1132	0340, 03A4, 0408, 046C																																																																																																																																																																																																															
9)	833, 933, 1033, 1133	0341, 03A5, 0409, 046D																																																																																																																																																																																																															
-	-	-																																																																																																																																																																																																															
<div><div>QD75P/QD75D OPR</div><div><div>SET/ Data MONIT END</div><div>RESET Chg. MENU</div></div><div><div>Travel after NPD ON</div><table><thead><tr><th>Axis</th><th></th></tr></thead><tbody><tr><td>1</td><td>0</td></tr><tr><td>2</td><td>0</td></tr><tr><td>3</td><td>0</td></tr><tr><td>4</td><td>0</td></tr></tbody></table><div>(μm:*10⁻¹) (inch:*10⁻²) (degree:*10⁻¹) (pulse:*1⁻¹)</div><div><div>Torque limit</div><table><thead><tr><th>Axis</th><th>Torque limit stored value</th><th>Zero point</th><th>Near point</th><th>Upper limit</th><th>Lower limit</th></tr></thead><tbody><tr><td>1</td><td>123 (%)</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>2</td><td>0 (%)</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>3</td><td>383 (%)</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>4</td><td>0 (%)</td><td>●</td><td>●</td><td>●</td><td>●</td></tr></tbody></table></div></div><div>2) 3) 4) 5) 6)</div></div> <tr><td>1)</td><td>824 to 825 924 to 925 1024 to 1025 1124 to 1125</td><td>0338 to 0339 039C to 039D 0400 to 0401 0464 to 0465</td></tr> <tr><td>2)</td><td>826, 926, 1026, 1126</td><td>033A, 039E, 0402, 0466</td></tr> <tr><td>3)</td><td rowspan="3">816, 916, 1016, 1116</td><td rowspan="3">0330, 0394, 03F8, 045C</td></tr> <tr><td>4)</td></tr> <tr><td>5)</td></tr> <tr><td>6)</td></tr> <tr><td>-</td><td>-</td><td>-</td></tr> <tr><td colspan="2" rowspan="11"><div><div>QD75P/QD75D Speed-position control</div><div><div>SET/ Data MONIT END</div><div>RESET Chg. MENU</div></div><div><div>SPSP positioning amount</div><table><thead><tr><th>Axis</th><th></th></tr></thead><tbody><tr><td>Axis1</td><td>0</td></tr><tr><td>Axis2</td><td>0</td></tr><tr><td>Axis3</td><td>1500</td></tr><tr><td>Axis4</td><td>0</td></tr></tbody></table><div>(μm):*10⁻¹ (degree):*10⁻¹ (inch):*10⁻² (pulse):*1</div><div><div>SPSP movement amount change register</div><table><thead><tr><th>Axis</th><th></th></tr></thead><tbody><tr><td>Axis1</td><td>0</td></tr><tr><td>Axis2</td><td>0</td></tr><tr><td>Axis3</td><td>0</td></tr><tr><td>Axis4</td><td>0</td></tr></tbody></table><div>Setting range 0 to 2147483647 (μm):*10⁻¹ (inch):*10⁻² (degree):*10⁻¹ (pulse):*1</div></div><div><div>Item</div><table><thead><tr><th></th><th>Axis1</th><th>Axis2</th><th>Axis3</th><th>Axis4</th></tr></thead><tbody><tr><td>Speed-position switching latch</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>Lin speed control</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>Speed-position switching enable</td><td>0:Disable</td><td>1:Enable</td><td>0:Disable</td><td>1:Enable</td></tr></tbody></table></div></div><div>1) 3) 4) 5)</div></div><tr><td>1)</td><td>814 to 815 914 to 915 1014 to 1015 1114 to 1115</td><td>032E to 032F 0392 to 0393 03F6 to 03F7 045A to 045B</td></tr><tr><td rowspan="4">2)</td><td>1526 to 1527 1626 to 1627 1726 to 1727 1826 to 1827</td><td>05F6 to 05F7 065A to 065B 06BE to 06BF 0722 to 0723</td></tr><tr><td>3)</td><td>817, 917, 1017, 1117</td><td>0331, 0395, 03F9, 045D</td></tr><tr><td>4)</td><td>817, 917, 1017, 1117</td><td>0331, 0395, 03F9, 045D</td></tr><tr><td>5)</td><td>1528, 1628, 1728, 1828</td><td>05F8, 065C, 06C0, 0724</td></tr><tr><td>-</td><td>-</td><td>-</td></tr></td></tr>		Axis		1	0	2	0	3	0	4	0	Axis	Torque limit stored value	Zero point	Near point	Upper limit	Lower limit	1	123 (%)	●	●	●	●	2	0 (%)	●	●	●	●	3	383 (%)	●	●	●	●	4	0 (%)	●	●	●	●	1)	824 to 825 924 to 925 1024 to 1025 1124 to 1125	0338 to 0339 039C to 039D 0400 to 0401 0464 to 0465	2)	826, 926, 1026, 1126	033A, 039E, 0402, 0466	3)	816, 916, 1016, 1116	0330, 0394, 03F8, 045C	4)	5)	6)	-	-	-	<div><div>QD75P/QD75D Speed-position control</div><div><div>SET/ Data MONIT END</div><div>RESET Chg. MENU</div></div><div><div>SPSP positioning amount</div><table><thead><tr><th>Axis</th><th></th></tr></thead><tbody><tr><td>Axis1</td><td>0</td></tr><tr><td>Axis2</td><td>0</td></tr><tr><td>Axis3</td><td>1500</td></tr><tr><td>Axis4</td><td>0</td></tr></tbody></table><div>(μm):*10⁻¹ (degree):*10⁻¹ (inch):*10⁻² (pulse):*1</div><div><div>SPSP movement amount change register</div><table><thead><tr><th>Axis</th><th></th></tr></thead><tbody><tr><td>Axis1</td><td>0</td></tr><tr><td>Axis2</td><td>0</td></tr><tr><td>Axis3</td><td>0</td></tr><tr><td>Axis4</td><td>0</td></tr></tbody></table><div>Setting range 0 to 2147483647 (μm):*10⁻¹ (inch):*10⁻² (degree):*10⁻¹ (pulse):*1</div></div><div><div>Item</div><table><thead><tr><th></th><th>Axis1</th><th>Axis2</th><th>Axis3</th><th>Axis4</th></tr></thead><tbody><tr><td>Speed-position switching latch</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>Lin speed control</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>Speed-position switching enable</td><td>0:Disable</td><td>1:Enable</td><td>0:Disable</td><td>1:Enable</td></tr></tbody></table></div></div><div>1) 3) 4) 5)</div></div> <tr><td>1)</td><td>814 to 815 914 to 915 1014 to 1015 1114 to 1115</td><td>032E to 032F 0392 to 0393 03F6 to 03F7 045A to 045B</td></tr> <tr><td rowspan="4">2)</td><td>1526 to 1527 1626 to 1627 1726 to 1727 1826 to 1827</td><td>05F6 to 05F7 065A to 065B 06BE to 06BF 0722 to 0723</td></tr> <tr><td>3)</td><td>817, 917, 1017, 1117</td><td>0331, 0395, 03F9, 045D</td></tr> <tr><td>4)</td><td>817, 917, 1017, 1117</td><td>0331, 0395, 03F9, 045D</td></tr> <tr><td>5)</td><td>1528, 1628, 1728, 1828</td><td>05F8, 065C, 06C0, 0724</td></tr> <tr><td>-</td><td>-</td><td>-</td></tr>		Axis		Axis1	0	Axis2	0	Axis3	1500	Axis4	0	Axis		Axis1	0	Axis2	0	Axis3	0	Axis4	0		Axis1	Axis2	Axis3	Axis4	Speed-position switching latch	●	●	●	●	Lin speed control	●	●	●	●	Speed-position switching enable	0:Disable	1:Enable	0:Disable	1:Enable	1)	814 to 815 914 to 915 1014 to 1015 1114 to 1115	032E to 032F 0392 to 0393 03F6 to 03F7 045A to 045B	2)	1526 to 1527 1626 to 1627 1726 to 1727 1826 to 1827	05F6 to 05F7 065A to 065B 06BE to 06BF 0722 to 0723	3)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D	4)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D	5)	1528, 1628, 1728, 1828	05F8, 065C, 06C0, 0724	-	-	-																																																																																													
		Axis																																																																																																																																																																																																															
		1	0																																																																																																																																																																																																														
		2	0																																																																																																																																																																																																														
		3	0																																																																																																																																																																																																														
		4	0																																																																																																																																																																																																														
Axis	Torque limit stored value	Zero point	Near point	Upper limit	Lower limit																																																																																																																																																																																																												
1	123 (%)	●	●	●	●																																																																																																																																																																																																												
2	0 (%)	●	●	●	●																																																																																																																																																																																																												
3	383 (%)	●	●	●	●																																																																																																																																																																																																												
4	0 (%)	●	●	●	●																																																																																																																																																																																																												
1)	824 to 825 924 to 925 1024 to 1025 1124 to 1125	0338 to 0339 039C to 039D 0400 to 0401 0464 to 0465																																																																																																																																																																																																															
2)	826, 926, 1026, 1126	033A, 039E, 0402, 0466																																																																																																																																																																																																															
3)	816, 916, 1016, 1116	0330, 0394, 03F8, 045C																																																																																																																																																																																																															
4)																																																																																																																																																																																																																	
5)																																																																																																																																																																																																																	
6)																																																																																																																																																																																																																	
-	-	-																																																																																																																																																																																																															
<div><div>QD75P/QD75D Speed-position control</div><div><div>SET/ Data MONIT END</div><div>RESET Chg. MENU</div></div><div><div>SPSP positioning amount</div><table><thead><tr><th>Axis</th><th></th></tr></thead><tbody><tr><td>Axis1</td><td>0</td></tr><tr><td>Axis2</td><td>0</td></tr><tr><td>Axis3</td><td>1500</td></tr><tr><td>Axis4</td><td>0</td></tr></tbody></table><div>(μm):*10⁻¹ (degree):*10⁻¹ (inch):*10⁻² (pulse):*1</div><div><div>SPSP movement amount change register</div><table><thead><tr><th>Axis</th><th></th></tr></thead><tbody><tr><td>Axis1</td><td>0</td></tr><tr><td>Axis2</td><td>0</td></tr><tr><td>Axis3</td><td>0</td></tr><tr><td>Axis4</td><td>0</td></tr></tbody></table><div>Setting range 0 to 2147483647 (μm):*10⁻¹ (inch):*10⁻² (degree):*10⁻¹ (pulse):*1</div></div><div><div>Item</div><table><thead><tr><th></th><th>Axis1</th><th>Axis2</th><th>Axis3</th><th>Axis4</th></tr></thead><tbody><tr><td>Speed-position switching latch</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>Lin speed control</td><td>●</td><td>●</td><td>●</td><td>●</td></tr><tr><td>Speed-position switching enable</td><td>0:Disable</td><td>1:Enable</td><td>0:Disable</td><td>1:Enable</td></tr></tbody></table></div></div><div>1) 3) 4) 5)</div></div> <tr><td>1)</td><td>814 to 815 914 to 915 1014 to 1015 1114 to 1115</td><td>032E to 032F 0392 to 0393 03F6 to 03F7 045A to 045B</td></tr> <tr><td rowspan="4">2)</td><td>1526 to 1527 1626 to 1627 1726 to 1727 1826 to 1827</td><td>05F6 to 05F7 065A to 065B 06BE to 06BF 0722 to 0723</td></tr> <tr><td>3)</td><td>817, 917, 1017, 1117</td><td>0331, 0395, 03F9, 045D</td></tr> <tr><td>4)</td><td>817, 917, 1017, 1117</td><td>0331, 0395, 03F9, 045D</td></tr> <tr><td>5)</td><td>1528, 1628, 1728, 1828</td><td>05F8, 065C, 06C0, 0724</td></tr> <tr><td>-</td><td>-</td><td>-</td></tr>		Axis		Axis1	0	Axis2	0	Axis3	1500	Axis4	0	Axis		Axis1	0	Axis2	0	Axis3	0	Axis4	0		Axis1	Axis2	Axis3	Axis4	Speed-position switching latch	●	●	●	●	Lin speed control	●	●	●	●	Speed-position switching enable	0:Disable	1:Enable	0:Disable	1:Enable	1)	814 to 815 914 to 915 1014 to 1015 1114 to 1115	032E to 032F 0392 to 0393 03F6 to 03F7 045A to 045B	2)	1526 to 1527 1626 to 1627 1726 to 1727 1826 to 1827	05F6 to 05F7 065A to 065B 06BE to 06BF 0722 to 0723	3)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D	4)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D	5)	1528, 1628, 1728, 1828	05F8, 065C, 06C0, 0724	-	-	-																																																																																																																																																						
		Axis																																																																																																																																																																																																															
		Axis1	0																																																																																																																																																																																																														
		Axis2	0																																																																																																																																																																																																														
		Axis3	1500																																																																																																																																																																																																														
		Axis4	0																																																																																																																																																																																																														
		Axis																																																																																																																																																																																																															
		Axis1	0																																																																																																																																																																																																														
		Axis2	0																																																																																																																																																																																																														
		Axis3	0																																																																																																																																																																																																														
		Axis4	0																																																																																																																																																																																																														
	Axis1	Axis2	Axis3	Axis4																																																																																																																																																																																																													
Speed-position switching latch	●	●	●	●																																																																																																																																																																																																													
Lin speed control	●	●	●	●																																																																																																																																																																																																													
Speed-position switching enable	0:Disable	1:Enable	0:Disable	1:Enable																																																																																																																																																																																																													
1)	814 to 815 914 to 915 1014 to 1015 1114 to 1115	032E to 032F 0392 to 0393 03F6 to 03F7 045A to 045B																																																																																																																																																																																																															
2)	1526 to 1527 1626 to 1627 1726 to 1727 1826 to 1827	05F6 to 05F7 065A to 065B 06BE to 06BF 0722 to 0723																																																																																																																																																																																																															
	3)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D																																																																																																																																																																																																														
	4)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D																																																																																																																																																																																																														
	5)	1528, 1628, 1728, 1828	05F8, 065C, 06C0, 0724																																																																																																																																																																																																														
-	-	-																																																																																																																																																																																																															

Screen example		No.	Buffer memory address	
			DEC	HEX
<div><div>QD75P/QD75D Position-speed control</div><div><div>1)</div><div><div>Position-speed change register</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div><div>Setting range</div><div><div>0 to 2000000000 (mm/min):*10⁻²</div><div>(inch/min):*10⁻³</div><div>(degree/min):*10⁻³</div><div>0 to 1000000 (pulse/sec):*1</div></div></div></div><div><div>2)</div><div><div>Position-speed switching latch</div><div><div>Item</div><div>AX.1</div><div>AX.2</div><div>AX.3</div><div>AX.4</div></div><div><div>Position-speed switching latch</div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>3)</div><div><div>In speed control</div><div><div>Item</div><div>AX.1</div><div>AX.2</div><div>AX.3</div><div>AX.4</div></div><div><div>In speed control</div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>4)</div><div><div>Position-speed switching enable</div><div><div>Item</div><div>AX.1</div><div>AX.2</div><div>AX.3</div><div>AX.4</div></div><div><div>Position-speed switching enable</div><div>0:Disable</div><div>1:Enable</div></div></div></div></div><div><div>1)</div><div><div>1530 to 1531</div><div>05FA to 05FB</div></div><div><div>1630 to 1631</div><div>065E to 065F</div></div><div><div>1730 to 1731</div><div>06C2 to 06C3</div></div><div><div>1830 to 1831</div><div>0726 to 0727</div></div><div><div>2)</div><div><div>817, 917, 1017, 1117</div><div>0331, 0395, 03F9, 045D</div></div><div><div>3)</div><div><div>817, 917, 1017, 1117</div><div>0331, 0395, 03F9, 045D</div></div><div><div>4)</div><div><div>1532, 1632, 1732, 1832</div><div>05FC, 0660, 06C4, 0728</div></div><div><div>-</div><div>-</div><div>-</div></div></div></div><tr><td rowspan="10"><div><div>QD75P/QD75D Axis control data-1</div><div><div>1)</div><div><div>New current value</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div><div>Setting range</div><div><div>-2147483648 (μm):*10⁻⁴</div><div>to 2147483647 (inch):*10⁻³</div><div>(pulse):*1</div><div>0 to 359999999 (degree):*10⁻³</div></div></div></div><div><div>2)</div><div><div>New speed value</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div><div>Setting range</div><div><div>0 to 20000000000 (mm/min):*10⁻²</div><div>(inch/min):*10⁻³</div><div>(degree/min):*10⁻³</div><div>0 to 1000000 (pulse/sec):*1</div></div></div></div></div><div><div><div>3)</div><div><div>Item</div><div>AX.1</div><div>AX.2</div><div>AX.3</div><div>AX.4</div><div>Set value</div></div><div><div>Torq.boost</div><div>0</div><div>0</div><div>0</div><div>0</div><div>1 to 300%</div></div><div><div>Step mode</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Des.unit 1:data No.</div></div><div><div>Step valid flag</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Invalid 1:Valid</div></div><div><div>Step start information</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Completed 1:Continue 2:Restarts</div></div></div><div><div><div>4)</div><div><div>Item</div><div>AX.1</div><div>AX.2</div><div>AX.3</div><div>AX.4</div><div>Set value</div></div><div><div>Skip command</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Completed 1:Skip</div></div><div><div>Use ext. command</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Invalid 1:Valid</div></div></div></div><div><div>1)</div><div><div>1506 to 1507</div><div>05E2 to 05E3</div></div><div><div>1606 to 1607</div><div>0646 to 0647</div></div><div><div>1706 to 1707</div><div>06AA to 06AB</div></div><div><div>1806 to 1807</div><div>070E to 070F</div></div><div><div>2)</div><div><div>1514 to 1515</div><div>05EA to 05EB</div></div><div><div>1614 to 1615</div><div>064E to 064F</div></div><div><div>1714 to 1715</div><div>06B2 to 06B3</div></div><div><div>1814 to 1815</div><div>0716 to 0717</div></div><div><div>3)</div><div><div>1513, 1613, 1713, 1813</div><div>05E9, 064D, 06B1, 0715</div></div><div><div>4)</div><div><div>1544, 1644, 1744, 1844</div><div>0608, 066C, 06D0, 0734</div></div><div><div>5)</div><div><div>1545, 1645, 1745, 1845</div><div>0609, 066D, 06D1, 0735</div></div><div><div>6)</div><div><div>1546, 1646, 1746, 1846</div><div>060A, 066E, 06D2, 0736</div></div><div><div>7)</div><div><div>1547, 1647, 1747, 1847</div><div>060B, 066F, 06D3, 0737</div></div><div><div>8)</div><div><div>1505, 1605, 1705, 1805</div><div>05E1, 0645, 06A9, 070D</div></div></div></div></div></div></div></div></div></div></div></td></tr></div></div></div></div>	<div><div>QD75P/QD75D Axis control data-1</div><div><div>1)</div><div><div>New current value</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div><div>Setting range</div><div><div>-2147483648 (μm):*10⁻⁴</div><div>to 2147483647 (inch):*10⁻³</div><div>(pulse):*1</div><div>0 to 359999999 (degree):*10⁻³</div></div></div></div><div><div>2)</div><div><div>New speed value</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div><div>Setting range</div><div><div>0 to 20000000000 (mm/min):*10⁻²</div><div>(inch/min):*10⁻³</div><div>(degree/min):*10⁻³</div><div>0 to 1000000 (pulse/sec):*1</div></div></div></div></div> <div><div><div>3)</div><div><div>Item</div><div>AX.1</div><div>AX.2</div><div>AX.3</div><div>AX.4</div><div>Set value</div></div><div><div>Torq.boost</div><div>0</div><div>0</div><div>0</div><div>0</div><div>1 to 300%</div></div><div><div>Step mode</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Des.unit 1:data No.</div></div><div><div>Step valid flag</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Invalid 1:Valid</div></div><div><div>Step start information</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Completed 1:Continue 2:Restarts</div></div></div><div><div><div>4)</div><div><div>Item</div><div>AX.1</div><div>AX.2</div><div>AX.3</div><div>AX.4</div><div>Set value</div></div><div><div>Skip command</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Completed 1:Skip</div></div><div><div>Use ext. command</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Invalid 1:Valid</div></div></div></div><div><div>1)</div><div><div>1506 to 1507</div><div>05E2 to 05E3</div></div><div><div>1606 to 1607</div><div>0646 to 0647</div></div><div><div>1706 to 1707</div><div>06AA to 06AB</div></div><div><div>1806 to 1807</div><div>070E to 070F</div></div><div><div>2)</div><div><div>1514 to 1515</div><div>05EA to 05EB</div></div><div><div>1614 to 1615</div><div>064E to 064F</div></div><div><div>1714 to 1715</div><div>06B2 to 06B3</div></div><div><div>1814 to 1815</div><div>0716 to 0717</div></div><div><div>3)</div><div><div>1513, 1613, 1713, 1813</div><div>05E9, 064D, 06B1, 0715</div></div><div><div>4)</div><div><div>1544, 1644, 1744, 1844</div><div>0608, 066C, 06D0, 0734</div></div><div><div>5)</div><div><div>1545, 1645, 1745, 1845</div><div>0609, 066D, 06D1, 0735</div></div><div><div>6)</div><div><div>1546, 1646, 1746, 1846</div><div>060A, 066E, 06D2, 0736</div></div><div><div>7)</div><div><div>1547, 1647, 1747, 1847</div><div>060B, 066F, 06D3, 0737</div></div><div><div>8)</div><div><div>1505, 1605, 1705, 1805</div><div>05E1, 0645, 06A9, 070D</div></div></div></div></div></div></div></div></div></div></div>			
		<div><div>QD75P/QD75D Axis control data-1</div><div><div>1)</div><div><div>New current value</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div><div>Setting range</div><div><div>-2147483648 (μm):*10⁻⁴</div><div>to 2147483647 (inch):*10⁻³</div><div>(pulse):*1</div><div>0 to 359999999 (degree):*10⁻³</div></div></div></div><div><div>2)</div><div><div>New speed value</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div><div>Setting range</div><div><div>0 to 20000000000 (mm/min):*10⁻²</div><div>(inch/min):*10⁻³</div><div>(degree/min):*10⁻³</div><div>0 to 1000000 (pulse/sec):*1</div></div></div></div></div> <div><div><div>3)</div><div><div>Item</div><div>AX.1</div><div>AX.2</div><div>AX.3</div><div>AX.4</div><div>Set value</div></div><div><div>Torq.boost</div><div>0</div><div>0</div><div>0</div><div>0</div><div>1 to 300%</div></div><div><div>Step mode</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Des.unit 1:data No.</div></div><div><div>Step valid flag</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Invalid 1:Valid</div></div><div><div>Step start information</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Completed 1:Continue 2:Restarts</div></div></div><div><div><div>4)</div><div><div>Item</div><div>AX.1</div><div>AX.2</div><div>AX.3</div><div>AX.4</div><div>Set value</div></div><div><div>Skip command</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Completed 1:Skip</div></div><div><div>Use ext. command</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Invalid 1:Valid</div></div></div></div><div><div>1)</div><div><div>1506 to 1507</div><div>05E2 to 05E3</div></div><div><div>1606 to 1607</div><div>0646 to 0647</div></div><div><div>1706 to 1707</div><div>06AA to 06AB</div></div><div><div>1806 to 1807</div><div>070E to 070F</div></div><div><div>2)</div><div><div>1514 to 1515</div><div>05EA to 05EB</div></div><div><div>1614 to 1615</div><div>064E to 064F</div></div><div><div>1714 to 1715</div><div>06B2 to 06B3</div></div><div><div>1814 to 1815</div><div>0716 to 0717</div></div><div><div>3)</div><div><div>1513, 1613, 1713, 1813</div><div>05E9, 064D, 06B1, 0715</div></div><div><div>4)</div><div><div>1544, 1644, 1744, 1844</div><div>0608, 066C, 06D0, 0734</div></div><div><div>5)</div><div><div>1545, 1645, 1745, 1845</div><div>0609, 066D, 06D1, 0735</div></div><div><div>6)</div><div><div>1546, 1646, 1746, 1846</div><div>060A, 066E, 06D2, 0736</div></div><div><div>7)</div><div><div>1547, 1647, 1747, 1847</div><div>060B, 066F, 06D3, 0737</div></div><div><div>8)</div><div><div>1505, 1605, 1705, 1805</div><div>05E1, 0645, 06A9, 070D</div></div></div></div></div></div></div></div></div></div></div>		

Screen example		No.	Buffer memory address																																																																																	
			DEC	HEX																																																																																
<div><div>QD75P/QD75D Axis control data-2</div><table><tr><th>Item</th><th>Axis1</th><th>Axis2</th><th>Axis3</th><th>Axis4</th><th>Item</th><th>Axis1</th><th>Axis2</th><th>Axis3</th><th>Axis4</th></tr><tr><td>1) Start No.</td><td>0</td><td>0</td><td>0</td><td>0</td><td>New acc time</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2) Starting point No.</td><td>0</td><td>0</td><td>0</td><td>0</td><td>New dec time</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>3) Axis error reset</td><td>0</td><td>0</td><td>0</td><td>0</td><td>IRQ in locus OP</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>4) Restart command</td><td>0</td><td>0</td><td>0</td><td>0</td><td>OPR req flag OFF</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>5) M code OFF request</td><td>0</td><td>0</td><td>0</td><td>0</td><td>MPG I/P mag.</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>6) A/D time change in SPD</td><td>0</td><td>0</td><td>0</td><td>0</td><td>MPG enable</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>7) Speed change request</td><td>0</td><td>0</td><td>0</td><td>0</td><td>New Torq value</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table></div>		Item	Axis1	Axis2	Axis3	Axis4	Item	Axis1	Axis2	Axis3	Axis4	1) Start No.	0	0	0	0	New acc time	0	0	0	0	2) Starting point No.	0	0	0	0	New dec time	0	0	0	0	3) Axis error reset	0	0	0	0	IRQ in locus OP	0	0	0	0	4) Restart command	0	0	0	0	OPR req flag OFF	0	0	0	0	5) M code OFF request	0	0	0	0	MPG I/P mag.	0	0	0	0	6) A/D time change in SPD	0	0	0	0	MPG enable	0	0	0	0	7) Speed change request	0	0	0	0	New Torq value	0	0	0	0	1)	1500, 1600, 1700, 1800	05DC, 0640, 06A4, 0708
Item	Axis1	Axis2	Axis3	Axis4	Item	Axis1	Axis2	Axis3	Axis4																																																																											
1) Start No.	0	0	0	0	New acc time	0	0	0	0																																																																											
2) Starting point No.	0	0	0	0	New dec time	0	0	0	0																																																																											
3) Axis error reset	0	0	0	0	IRQ in locus OP	0	0	0	0																																																																											
4) Restart command	0	0	0	0	OPR req flag OFF	0	0	0	0																																																																											
5) M code OFF request	0	0	0	0	MPG I/P mag.	0	0	0	0																																																																											
6) A/D time change in SPD	0	0	0	0	MPG enable	0	0	0	0																																																																											
7) Speed change request	0	0	0	0	New Torq value	0	0	0	0																																																																											
		2)	1501, 1601, 1701, 1801	05DD, 0641, 06A5, 0709																																																																																
		3)	1502, 1602, 1702, 1802	05DE, 0642, 06A6, 070A																																																																																
		4)	1503, 1603, 1703, 1803	05DF, 0643, 06A7, 070B																																																																																
		5)	1504, 1604, 1704, 1804	05E0, 0644, 06A8, 070C																																																																																
		6)	1512, 1612, 1712, 1812	05E8, 064C, 06B0, 0714																																																																																
		7)	1516, 1616, 1716, 1816	05EC, 0650, 06B4, 0718																																																																																
		8)	1508 to 1509	05E4 to 05E5																																																																																
			1608 to 1609	0648 to 0649																																																																																
			1708 to 1709	06AC to 06AD																																																																																
			1808 to 1809	0710 to 0711																																																																																
		9)	1510 to 1511	05E6 to 05E7																																																																																
			1610 to 1611	064A to 064B																																																																																
			1710 to 1711	06AE to 06AF																																																																																
			1810 to 1811	0712 to 0713																																																																																
		10)	1520, 1620, 1720, 1820	05F0, 0654, 06B8, 071C																																																																																
		11)	1521, 1621, 1721, 1821	05F1, 0655, 06B9, 071D																																																																																
		12)	1522 to 1523	05F2 to 05F3																																																																																
			1622 to 1623	0656 to 0657																																																																																
			1722 to 1723	06BA to 06BB																																																																																
			1822 to 1823	071E to 071F																																																																																
		13)	1524, 1624, 1724, 1824	05F4, 0658, 06BC, 0720																																																																																
		14)	1525, 1625, 1725, 1825	05F5, 0659, 06BD, 0721																																																																																
<div><div>QD75P/QD75D Axis control data-3</div><table><tr><th>Item</th><th>Axis1</th><th>Axis2</th><th>Axis3</th><th>Axis4</th><th>Item</th><th>Axis1</th><th>Axis2</th><th>Axis3</th><th>Axis4</th></tr><tr><td>1) Pos. change</td><td>0</td><td>0</td><td>0</td><td>0</td><td rowspan="4">Simultaneous starting axis start data</td><td>Axis1</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2) Teaching data selection</td><td>0</td><td>0</td><td>0</td><td>0</td><td>Axis2</td><td>0</td><td>0</td><td>0</td></tr><tr><td>3) Teaching positioning data No.</td><td>0</td><td>0</td><td>0</td><td>0</td><td>Axis3</td><td>0</td><td>0</td><td>0</td></tr><tr><td></td><td>0</td><td>0</td><td>0</td><td>0</td><td>Axis4</td><td>0</td><td>0</td><td>0</td></tr><tr><td>4) ABS direction in degrees</td><td>0</td><td>0</td><td>0</td><td>0</td><td colspan="5">0:Nontarget / 1 to 600:Start data No.</td></tr></table></div>		Item	Axis1	Axis2	Axis3	Axis4	Item	Axis1	Axis2	Axis3	Axis4	1) Pos. change	0	0	0	0	Simultaneous starting axis start data	Axis1	0	0	0	2) Teaching data selection	0	0	0	0	Axis2	0	0	0	3) Teaching positioning data No.	0	0	0	0	Axis3	0	0	0		0	0	0	0	Axis4	0	0	0	4) ABS direction in degrees	0	0	0	0	0:Nontarget / 1 to 600:Start data No.					1)	1538, 1638, 1738, 1838	0602, 0666, 06CA, 072E																							
Item	Axis1	Axis2	Axis3	Axis4	Item	Axis1	Axis2	Axis3	Axis4																																																																											
1) Pos. change	0	0	0	0	Simultaneous starting axis start data	Axis1	0	0	0																																																																											
2) Teaching data selection	0	0	0	0		Axis2	0	0	0																																																																											
3) Teaching positioning data No.	0	0	0	0		Axis3	0	0	0																																																																											
	0	0	0	0		Axis4	0	0	0																																																																											
4) ABS direction in degrees	0	0	0	0	0:Nontarget / 1 to 600:Start data No.																																																																															
		2)	1548, 1648, 1748, 1848	060C, 0670, 06D4, 0738																																																																																
		3)	1549, 1649, 1749, 1849	060D, 0671, 06D5, 0739																																																																																
		4)	1550, 1650, 1750, 1850	060E, 0672, 06D6, 073A																																																																																
		5)	1540, 1640, 1740, 1840, 1541, 1641, 1741, 1841, 1542, 1642, 1742, 1842, 1543, 1643, 1743, 1843	0604, 0668, 06CC, 0730, 0605, 0669, 06CD, 0731, 0606, 066A, 06CE, 0732, 0607, 066B, 06CF, 0733																																																																																
		-	-	-																																																																																

Screen example		No.	Buffer memory address																																										
			DEC	HEX																																									
<div><div>QD75P/QD75D Axis control data-4</div><div><div>1)</div><div><div>Inclining movement amount</div><div>Axis10Axis20Axis30Axis40</div><div>Setting range1 to 65535 (μm) × 10⁻³ [inch] × 10⁻⁶ (degree) × 10⁻³ [pulse] × 1 0: JOG operation</div></div><div><div>2)</div><div><div>JOG speed</div><div>Axis10Axis20Axis30Axis40</div><div>Setting range0 to 2000000000 (mm/min) × 10⁻³ (inch/min) × 10⁻³ (degree/min) × 10⁻³ (pulse/sec) × 1 0 to 1000000 (pulse/sec) × 1</div></div></div><div><div>3)</div><div><div>Target position change value (Address)</div><div>Axis10Axis20Axis30Axis40</div><div>Setting rangeABS-INC -2147483648 to 2147483647 (μm) × 10⁻³ (inch) × 10⁻⁶ (degree) × 10⁻³ [pulse] × 1 (*ABS: 0 to 65535 (degree) × 10⁻³)</div></div><div><div>4)</div><div><div>Target position change value (Speed)</div><div>Axis10Axis20Axis30Axis40</div><div>Setting range0 to 2000000000 (mm/min) × 10⁻³ (inch/min) × 10⁻³ (degree/min) × 10⁻³ (pulse/sec) × 1 0 to 1000000 (pulse/sec) × 1</div></div></div></div></div><tr><td>1)</td><td>1517, 1617, 1717, 1817</td><td>05ED, 0651, 06B5, 0719</td></tr><tr><td rowspan="4">2)</td><td>1518 to 1519</td><td>05EE to 05EF</td></tr><tr><td>1618 to 1619</td><td>0652 to 0653</td></tr><tr><td>1718 to 1719</td><td>06B6 to 06B7</td></tr><tr><td>1818 to 1819</td><td>071A to 071B</td></tr><tr><td rowspan="4">3)</td><td>1534 to 1535</td><td>05FE to 05FF</td></tr><tr><td>1634 to 1635</td><td>0662 to 0663</td></tr><tr><td>1734 to 1735</td><td>06C6 to 06C7</td></tr><tr><td>1834 to 1835</td><td>072A to 072B</td></tr><tr><td rowspan="3">4)</td><td>1536 to 1537</td><td>0600 to 0601</td></tr><tr><td>1636 to 1637</td><td>0664 to 0665</td></tr><tr><td>1736 to 1737</td><td>06C8 to 06C9</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td rowspan="2"><div><div>QD75P/QD75D Start History</div><div><div>1)</div><div><div>Start History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Start</div><div>Kind</div><div>Time</div><div>Judge</div></div><div><div>0</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>1</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>2</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>3</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>4</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>5</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>6</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>7</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div></div><div><div>Start History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Start</div><div>Kind</div><div>Time</div><div>Judge</div></div><div><div>8</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>9</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>10</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>11</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>12</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>13</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>14</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>15</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div></div></div></div><tr><td>-</td><td>-</td><td>-</td></tr><tr><td rowspan="4"><div><div>QD75P/QD75D Error & Warning History</div><div><div>1)</div><div><div>Error History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>0</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>1</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>2</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>3</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>4</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>5</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>6</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>7</div><div>0</div><div>0</div><div>00 00 00</div></div></div><div><div>Error History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>8</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>9</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>10</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>11</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>12</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>13</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>14</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>15</div><div>0</div><div>0</div><div>00 00 00</div></div></div></div><div><div>2)</div><div><div>Warning History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>0</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>1</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>2</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>3</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>4</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>5</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>6</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>7</div><div>0</div><div>0</div><div>00 00 00</div></div></div><div><div>Warning History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>8</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>9</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>10</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>11</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>12</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>13</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>14</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>15</div><div>0</div><div>0</div><div>00 00 00</div></div></div></div></div><tr><td>1)</td><td>1293 to 1356</td><td>050D to 054C</td></tr><tr><td>2)</td><td>1358 to 1421</td><td>054E to 058D</td></tr><tr><td>-</td><td>-</td><td>-</td></tr></td></tr></td></tr></div>	1)	1517, 1617, 1717, 1817	05ED, 0651, 06B5, 0719	2)	1518 to 1519	05EE to 05EF	1618 to 1619	0652 to 0653	1718 to 1719	06B6 to 06B7	1818 to 1819	071A to 071B	3)	1534 to 1535	05FE to 05FF	1634 to 1635	0662 to 0663	1734 to 1735	06C6 to 06C7	1834 to 1835	072A to 072B	4)	1536 to 1537	0600 to 0601	1636 to 1637	0664 to 0665	1736 to 1737	06C8 to 06C9	-	-	-	<div><div>QD75P/QD75D Start History</div><div><div>1)</div><div><div>Start History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Start</div><div>Kind</div><div>Time</div><div>Judge</div></div><div><div>0</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>1</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>2</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>3</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>4</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>5</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>6</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>7</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div></div><div><div>Start History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Start</div><div>Kind</div><div>Time</div><div>Judge</div></div><div><div>8</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>9</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>10</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>11</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>12</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>13</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>14</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>15</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div></div></div></div> <tr><td>-</td><td>-</td><td>-</td></tr> <tr><td rowspan="4"><div><div>QD75P/QD75D Error & Warning History</div><div><div>1)</div><div><div>Error History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>0</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>1</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>2</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>3</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>4</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>5</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>6</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>7</div><div>0</div><div>0</div><div>00 00 00</div></div></div><div><div>Error History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>8</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>9</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>10</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>11</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>12</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>13</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>14</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>15</div><div>0</div><div>0</div><div>00 00 00</div></div></div></div><div><div>2)</div><div><div>Warning History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>0</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>1</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>2</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>3</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>4</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>5</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>6</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>7</div><div>0</div><div>0</div><div>00 00 00</div></div></div><div><div>Warning History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>8</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>9</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>10</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>11</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>12</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>13</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>14</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>15</div><div>0</div><div>0</div><div>00 00 00</div></div></div></div></div><tr><td>1)</td><td>1293 to 1356</td><td>050D to 054C</td></tr><tr><td>2)</td><td>1358 to 1421</td><td>054E to 058D</td></tr><tr><td>-</td><td>-</td><td>-</td></tr></td></tr>	-	-	-	<div><div>QD75P/QD75D Error & Warning History</div><div><div>1)</div><div><div>Error History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>0</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>1</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>2</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>3</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>4</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>5</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>6</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>7</div><div>0</div><div>0</div><div>00 00 00</div></div></div><div><div>Error History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>8</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>9</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>10</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>11</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>12</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>13</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>14</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>15</div><div>0</div><div>0</div><div>00 00 00</div></div></div></div><div><div>2)</div><div><div>Warning History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>0</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>1</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>2</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>3</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>4</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>5</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>6</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>7</div><div>0</div><div>0</div><div>00 00 00</div></div></div><div><div>Warning History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>8</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>9</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>10</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>11</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>12</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>13</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>14</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>15</div><div>0</div><div>0</div><div>00 00 00</div></div></div></div></div> <tr><td>1)</td><td>1293 to 1356</td><td>050D to 054C</td></tr> <tr><td>2)</td><td>1358 to 1421</td><td>054E to 058D</td></tr> <tr><td>-</td><td>-</td><td>-</td></tr>	1)	1293 to 1356	050D to 054C	2)	1358 to 1421	054E to 058D	-	-	-
	1)	1517, 1617, 1717, 1817	05ED, 0651, 06B5, 0719																																										
	2)	1518 to 1519	05EE to 05EF																																										
		1618 to 1619	0652 to 0653																																										
		1718 to 1719	06B6 to 06B7																																										
		1818 to 1819	071A to 071B																																										
	3)	1534 to 1535	05FE to 05FF																																										
		1634 to 1635	0662 to 0663																																										
		1734 to 1735	06C6 to 06C7																																										
		1834 to 1835	072A to 072B																																										
4)	1536 to 1537	0600 to 0601																																											
	1636 to 1637	0664 to 0665																																											
	1736 to 1737	06C8 to 06C9																																											
-	-	-																																											
<div><div>QD75P/QD75D Start History</div><div><div>1)</div><div><div>Start History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Start</div><div>Kind</div><div>Time</div><div>Judge</div></div><div><div>0</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>1</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>2</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>3</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>4</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>5</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>6</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>7</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div></div><div><div>Start History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Start</div><div>Kind</div><div>Time</div><div>Judge</div></div><div><div>8</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>9</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>10</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>11</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>12</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>13</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>14</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>15</div><div>0</div><div>0</div><div>0</div><div>00 00 00</div><div>0</div></div></div></div></div> <tr><td>-</td><td>-</td><td>-</td></tr> <tr><td rowspan="4"><div><div>QD75P/QD75D Error & Warning History</div><div><div>1)</div><div><div>Error History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>0</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>1</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>2</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>3</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>4</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>5</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>6</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>7</div><div>0</div><div>0</div><div>00 00 00</div></div></div><div><div>Error History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>8</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>9</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>10</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>11</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>12</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>13</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>14</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>15</div><div>0</div><div>0</div><div>00 00 00</div></div></div></div><div><div>2)</div><div><div>Warning History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>0</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>1</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>2</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>3</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>4</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>5</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>6</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>7</div><div>0</div><div>0</div><div>00 00 00</div></div></div><div><div>Warning History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>8</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>9</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>10</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>11</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>12</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>13</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>14</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>15</div><div>0</div><div>0</div><div>00 00 00</div></div></div></div></div><tr><td>1)</td><td>1293 to 1356</td><td>050D to 054C</td></tr><tr><td>2)</td><td>1358 to 1421</td><td>054E to 058D</td></tr><tr><td>-</td><td>-</td><td>-</td></tr></td></tr>	-	-	-	<div><div>QD75P/QD75D Error & Warning History</div><div><div>1)</div><div><div>Error History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>0</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>1</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>2</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>3</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>4</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>5</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>6</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>7</div><div>0</div><div>0</div><div>00 00 00</div></div></div><div><div>Error History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>8</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>9</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>10</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>11</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>12</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>13</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>14</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>15</div><div>0</div><div>0</div><div>00 00 00</div></div></div></div><div><div>2)</div><div><div>Warning History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>0</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>1</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>2</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>3</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>4</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>5</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>6</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>7</div><div>0</div><div>0</div><div>00 00 00</div></div></div><div><div>Warning History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>8</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>9</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>10</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>11</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>12</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>13</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>14</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>15</div><div>0</div><div>0</div><div>00 00 00</div></div></div></div></div> <tr><td>1)</td><td>1293 to 1356</td><td>050D to 054C</td></tr> <tr><td>2)</td><td>1358 to 1421</td><td>054E to 058D</td></tr> <tr><td>-</td><td>-</td><td>-</td></tr>	1)	1293 to 1356	050D to 054C	2)	1358 to 1421	054E to 058D	-	-	-																																
	-	-	-																																										
<div><div>QD75P/QD75D Error & Warning History</div><div><div>1)</div><div><div>Error History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>0</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>1</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>2</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>3</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>4</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>5</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>6</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>7</div><div>0</div><div>0</div><div>00 00 00</div></div></div><div><div>Error History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>8</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>9</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>10</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>11</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>12</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>13</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>14</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>15</div><div>0</div><div>0</div><div>00 00 00</div></div></div></div><div><div>2)</div><div><div>Warning History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>0</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>1</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>2</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>3</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>4</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>5</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>6</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>7</div><div>0</div><div>0</div><div>00 00 00</div></div></div><div><div>Warning History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>8</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>9</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>10</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>11</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>12</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>13</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>14</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>15</div><div>0</div><div>0</div><div>00 00 00</div></div></div></div></div> <tr><td>1)</td><td>1293 to 1356</td><td>050D to 054C</td></tr> <tr><td>2)</td><td>1358 to 1421</td><td>054E to 058D</td></tr> <tr><td>-</td><td>-</td><td>-</td></tr>	1)	1293 to 1356	050D to 054C		2)	1358 to 1421	054E to 058D	-	-	-																																			
	1)	1293 to 1356	050D to 054C																																										
	2)	1358 to 1421	054E to 058D																																										
	-	-	-																																										

Screen example		No.	Buffer memory address	
			DEC	HEX
1)		1)	2000 to 2002, 2004 to 2012, 2014 to 2022, 2024 to 2029	07D0 to 07D2, 07D4 to 07DC, 07DE to 07E6, 07E8 to 07ED,
		2)	8000 to 8002, 8004 to 8012, 8014 to 8022, 8024 to 8029	1F40 to 1F42, 1F44 to 1F4C, 1F4E to 1F56, 1F58 to 1F5D
		3)	14000 to 14002, 14004 to 14012, 14014 to 14022, 14024 to 14029	36B0 to 36B2, 36B4 to 36BC, 36BE to 36C6, 36C8 to 36CD
		4)	20000 to 20002, 20004 to 20012, 20014 to 20022, 20024 to 20029	4E20 to 4E22, 4E24 to 4E2C, 4E2E to 4E36, 4E38 to 4E3D
		-	-	-

6.5.35 QD75M module monitoring

Screen example	No.	Buffer memory address	
		DEC	HEX
	1)	800 to 801	0320 to 0321
		900 to 901	0384 to 0385
		1000 to 1001	03E8 to 03E9
		1100 to 1101	044C to 044D
	2)	812 to 813	032C to 032D
		912 to 913	0390 to 0391
		1012 to 1013	03F4 to 03F5
		1112 to 1113	0458 to 0459
	3)	809, 909, 1009, 1109	0329, 038D, 03F1, 0455
	4)	806, 906, 1006, 1106	0326, 038A, 03EE, 0452
	5)	807, 907, 1007, 1107	0327, 038B, 03EF, 0453
	6)	808, 908, 1008, 1108	0328, 038C, 03F0, 0454
	1)	-	-
	-	-	-
	1)	0, 150, 300, 450	0000, 0096, 012C, 01C2
	2)	2 to 3, 152 to 153, 302 to 303, 452 to 453	0002 to 0003, 0098 to 0099, 012E to 012F 01C4 to 01C7
	3)	1, 151, 301, 451	0001, 0097, 012D, 01C3
	4)	4 to 5, 154 to 155, 304 to 305, 454 to 455	0004 to 0005, 009A to 009B, 0130 to 0131, 01C6 to 01C7
	-	-	-

Screen example		No.	Buffer memory address	
			DEC	HEX
<div><div>QD75M Basic parameters 2</div><div><div><div>Speed limit value</div><div><div>Axis100530</div><div>Axis20</div><div>Axis30</div><div>Axis40</div></div><div><div>Setting range</div><div>1 to 200000000 (mm/min):+10⁶ (inch/min):+10⁴ (degree/min):+10⁴ 1 to 10000000 (pulse/sec):+1</div></div></div><div><div><div>Deceleration time 0</div><div><div>Axis131</div><div>Axis20</div><div>Axis30</div><div>Axis40</div></div><div><div>Setting range</div><div>1 to 3688608 (msec)</div></div></div></div><div><div><div>Acceleration time 0</div><div><div>Axis1983055</div><div>Axis20</div><div>Axis30</div><div>Axis40</div></div><div><div>Setting range</div><div>1 to 3688608 (msec)</div></div></div></div></div></div>		1)	10 to 11	000A to 000B
			160 to 161	00A0 to 00A1
			310 to 311	0136 to 0137
			460 to 461	01CC to 01CD
		2)	12 to 13	000C to 000D
			162 to 163	00A2 to 00A3
			312 to 313	0138 to 0139
			462 to 463	01CE to 01CF
		3)	14 to 15	000E to 000F
			164 to 165	00A4 to 00A5
			314 to 315	013A to 013B
			464 to 465	01D0 to 01D1
		-	-	-
<div><div>QD75M Detailed parameters 1-1</div><div><div><div>Backlash compensation amount</div><div><div>Axis10</div><div>Axis20</div><div>Axis30</div><div>Axis40</div></div><div><div>Setting range</div><div>(μm):+10³ (inch):+10⁻⁴ (degree):+10⁻⁴ (pulse):+1</div></div></div><div><div><div>Manual pulse generator input selection</div><div><div>Axis10</div><div>Axis2-</div><div>Axis3-</div><div>Axis4-</div></div><div><div>Setting range</div><div>0/A-phase/B-phase/multiplied by 4 1/A-phase/B-phase/multiplied by 2 2/A-phase/B-phase/multiplied by 1 3:PLS/SLG</div></div></div><div><div><div>Software stroke upper limit value</div><div><div>High Axis100530</div><div>Axis20</div><div>Axis30</div><div>Axis40</div></div><div><div>Low Axis10</div><div>Axis20</div><div>Axis30</div><div>Axis40</div></div><div><div>Setting range</div><div>-2147483648 (μm):+10⁶ to 2147483647 (pulse):+1 (degree):+10⁻⁴</div></div></div><div><div><div>Item</div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div><div>Set Range</div></div><div><div>S/W stroke limit select</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0/0: feed 1: feed</div></div><div><div>S/W stroke limit OK/NG setting</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0: valid 1: invalid</div></div><div><div>Torque limit set value</div><div>0</div><div>0</div><div>0</div><div>0</div><div>1~500 [%]</div></div></div></div></div></div></div>		1)	17, 167, 317, 467	0011, 00A7, 013D, 01D3
			18 to 19	0012 to 0013
			168 to 169	00A8 to 00A9
			318 to 319	013E to 013F
			468 to 469	01D4 to 01D5
		2)	20 to 21	0014 to 0015
			170 to 171	00AA to 00AB
			320 to 321	0140 to 0141
			470 to 471	01D6 to 01D7
		3)	33	0021
		4)	22, 172, 322, 472	0016, 00AC, 0142, 01D8
		5)	23, 173, 323, 473	0017, 00AD, 0143, 01D9
		6)	26, 176, 326, 476	001A, 00B0, 0146, 01DC
<div><div>QD75M Detailed parameters 1-2</div><div><div><div>Item</div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div><div>Set range</div></div><div><div>Woods ON sig</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:WITH 1:AFter</div></div><div><div>Speed switching mode</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Normal 1:Frontal</div></div><div><div>Interpolate speed set method</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0:Comp. 1:Ref.Ax</div></div><div><div><div>Command in position width</div><div><div>Axis10</div><div>Axis20</div><div>Axis30</div><div>Axis40</div></div><div><div>Setting range</div><div>1 to 2147483647 (μm):+10⁶ (inch):+10⁻⁴ (degree):+10⁻⁴(pulse):+1</div></div></div><div><div><div>Item</div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div><div>Set Range</div></div><div><div>Lower limit</div><div>Neg.</div><div>Neg.</div><div>Neg.</div><div>Neg.</div><div></div></div><div><div>Upper limit</div><div>Neg.</div><div>Neg.</div><div>Neg.</div><div>Neg.</div><div></div></div><div><div>Stop signal</div><div>Neg.</div><div>Neg.</div><div>Neg.</div><div>Neg.</div><div></div></div><div><div>External command</div><div>Neg.</div><div>Neg.</div><div>Neg.</div><div>Neg.</div><div></div></div><div><div>Near point dog</div><div>Neg.</div><div>Neg.</div><div>Neg.</div><div>Neg.</div><div></div></div></div></div></div></div>		1)	27, 177, 327, 477	001B, 00B1, 0147, 01DD
		2)	28, 178, 328, 478	001C, 00B2, 0148, 01DE
		3)	29, 179, 329, 479	001D, 00B3, 0149, 01DF
		4)	24 to 25	0018 to 0019
			174 to 175	00AE to 00AF
			324 to 325	0144 to 0145
			474 to 475	01DA to 01DB
		5)	30, 180, 330, 480	001E, 00B4, 014A, 01E0
		6)	34, 184, 334, 484	0022, 00B8, 014E, 01E4
		7)	31, 181, 331, 481	001F, 00B5, 014B, 01E1
		-	-	-

1)

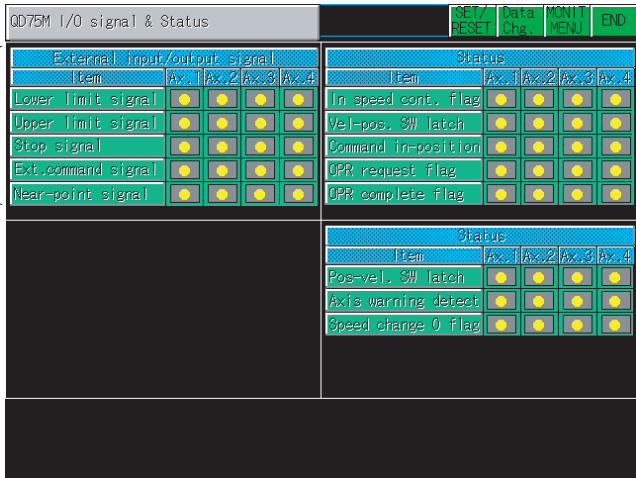

3)

2)

Screen example		No.	Buffer memory address			
			DEC	HEX		
1)		1)	36 to 41	0024 to 0029		
			186 to 191	00BA to 00BF		
			336 to 341	0150 to 0155		
			486 to 491	01E6 to 01EB		
	2)	2)	42 to 47	002A to 002F		
			192 to 197	00C0 to 00C5		
			342 to 347	0156 to 015B		
			492 to 497	01EC to 01F0		
	3)	3)	48 to 49	0030 to 0031		
			198 to 199	00C6 to 00C7		
348 to 349			015C to 015D			
498 to 499			01F2 to 01F3			
4)	4)	50, 200, 350, 500	0032, 00C8, 015E, 01F4			
		51, 501, 351, 501	0033, 01F5, 015F, 01F5			
2)		1)	52, 202, 352, 502	0034, 00CA, 0160, 01F6		
			2)	53, 203, 353, 503	0035, 00CB, 0161, 01F7	
				56, 206, 356, 506	0038, 00CE, 0164, 01FA	
				57, 207, 357, 507	0039, 00CF, 0165, 01FB	
	3)	3)	58, 208, 358, 508	003A, 00D0, 0166, 01FC		
			6)	54 to 55, 204 to 205, 354 to 355, 504 to 505	0036 to 0037, 00CC to 00CD, 0162 to 0163, 01F8 to 01F9	
				7)	59, 209, 359, 509	003B, 00D1, 0167, 01FD
					8)	60 to 61	003C to 003D
	9)	9)	210 to 211			00D2 to 00D3
			360 to 361	0168 to 0169		
10)	10)	510 to 511	01FE to 01FF			
		62, 212, 362, 512	003E, 00D4, 016A, 0200			
10)	10)	64 to 65, 214 to 215, 364 to 365, 514 to 515	0040 to 0041, 00D6 to 00D7, 016C to 016D, 0202 to 0203			

Screen example		No.	Buffer memory address	
			DEC	HEX
<div><div>QD75M OPR detailed parameters</div><div><div><div>1)</div><div><div><div>Dwell time</div><div>0 to 65535(msec)</div></div><div><div>2)</div><div><div>Accel. time</div><div>0 to 3</div></div><div><div>3)</div><div><div>Decel. time</div><div>0 to 3</div></div><div><div>4)</div><div><div>Torque limit</div><div>1 to 300(%)</div></div></div><div><div>OPR detailed parameters</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div><div><div>Setting range</div><div>0 to 2147483647 (μm)*10⁻¹ to 2147483647 (inch)*10⁻⁶ (degree)*10⁻⁶ (pulse)*1</div></div></div><div><div>OPR shift amount</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div><div><div>Setting range</div><div>-2147483648 (μm)*10⁻¹ to 2147483647 (inch)*10⁻⁶ (degree)*10⁻⁶ (pulse)*1</div></div></div></div></div><div><div>5)</div><div><div>Speed set for OPR shift</div><div>0:OPR speed 1:Creep speed</div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div><div><div>Dwell time for OPR retry</div><div>0 to 65535(msec)</div></div></div></div></div></div></div>	1)	79, 229, 379, 529	004F, 00E5, 017B, 0211	
	2)	82, 232, 382, 532	0052, 00E8, 017E, 0214	
	3)	83, 233, 383, 533	0053, 00E9, 017F, 0215	
	4)	86, 236, 386, 536	0056, 00EC, 0182, 0218	
	5)	80 to 81	0050 to 0051	
		230 to 231	00E6 to 00E7	
		380 to 381	017C to 017D	
		530 to 531	0212 to 0213	
	6)	84 to 85	0054 to 0055	
		234 to 235	00EA to 00EB	
		384 to 385	0180 to 0181	
		534 to 535	0216 to 0217	
	7)	88, 238, 388, 538	0058, 00EE, 0184, 021A	
	8)	89, 239, 389, 539	0059, 00EF, 0185, 021B	

<div><div>QD75M OPR basic parameters</div><div><div><div>1)</div><div><div>OPR method</div><div>0:Near-point dog 1:Count1 2:Count2 3>Data Set</div></div><div><div>2)</div><div>OPR direction</div><div>0:Positive 1:negative</div></div><div><div>3)</div><div>OPR retry</div><div>0:Do not 1:Do</div></div></div><div><div>OP address</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div><div><div>Setting range</div><div>-2147483648 (μm)*10⁻¹ to 2147483647 (inch)*10⁻⁶ (pulse)*1 0 to 35999999 (degree)*10⁻⁶</div></div></div><div><div>OPR speed</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div><div><div>Setting range</div><div>1 to 2000000000 (mm/min)*10⁻⁶ (inch/min)*10⁻³ (degree/min)*10⁻³ 1 to 10000000 (pulse/sec)*1</div></div></div><div><div>Creep speed</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div><div><div>Setting range</div><div>1 to 2000000000 (mm/min)*10⁻⁶ (inch/min)*10⁻³ (degree/min)*10⁻³ 1 to 10000000 (pulse/sec)*1</div></div></div></div></div> <div><div>5)</div><div><div>OPR speed</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div><div><div>Setting range</div><div>1 to 2000000000 (mm/min)*10⁻⁶ (inch/min)*10⁻³ (degree/min)*10⁻³ 1 to 10000000 (pulse/sec)*1</div></div></div></div>	1)	70, 220, 370, 520	0046, 00DC, 0172, 0208
	2)	71, 221, 371, 521	0047, 00DD, 0173, 0209
	3)	78, 228, 378, 528	004E, 00E4, 017A, 0210
	4)	72 to 73	0048 to 0049
		222 to 223	00DE to 00DF
		372 to 373	0174 to 0175
	5)	522 to 523	020A to 020B
		74 to 75	004A to 004B
		224 to 225	00E0 to 00E1
	6)	374 to 375	0176 to 0177
		524 to 525	020C to 020D
		76 to 77	004C to 004D
		226 to 227	00E2 to 00E3
	376 to 377	0178 to 0179	
		526 to 527	020E to 020F

Screen example		No.	Buffer memory address	
			DEC	HEX
	1)	1)	816, 916, 1016, 1116	0330, 0394, 03F8, 045C
	2)	2)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D
	-	-	-	-
	1)	1)	818 to 819	0332 to 0333
			918 to 919	0396 to 0397
			1018 to 1019	03FA to 03FB
			1118 to 1119	045E to 045F
	2)	2)	802 to 803	0322 to 0323
			902 to 903	0386 to 0387
			1002 to 1003	03EA to 03EB
			1102 to 1103	044E to 044F
	3)	3)	820 to 821	0334 to 0335
			920 to 921	0398 to 0399
			1020 to 1021	03FC to 03FD
			1120 to 1121	0460 to 0461
	4)	4)	810 to 811	032A to 032B
			910 to 911	038E to 038F
			1010 to 1011	03F2 to 03F3
			1110 to 1111	0456 to 0457
	5)	5)	812 to 813	032C to 032D
			912 to 913	0390 to 0391
			1012 to 1013	03F4 to 03F5
			1112 to 1113	0458 to 0459
	6)	6)	830, 930, 1030, 1130	033E, 03A2, 0406, 046A
	7)	7)	831, 931, 1031, 1131	033F, 03A3, 0407, 046B

Screen example	No.	Buffer memory address	
		DEC	HEX
<p>QD75M Axis monitor data-2</p> <p>1) 4) 5) 2) 6) 7) 3)</p>	1)	827, 927, 1027, 1127	033B, 039F, 0403, 0467
	2)	828, 928, 1028, 1128	033C, 03A0, 0404, 0468
	3)	829, 929, 1029, 1129	033D, 03A1, 0405, 0469
	4)	834, 934, 1034, 1134	0342, 03A6, 040A, 046E
	5)	835, 935, 1035, 1135	0343, 03A8, 040B, 046F
	6)	836, 936, 1036, 1136	0344, 03A8, 040C, 0470
	7)	837, 937, 1037, 1137	0345, 03A9, 040D, 0471
	8)	832, 932, 1032, 1132	0340, 03A4, 0408, 046C
	9)	833, 933, 1033, 1133	0341, 03A5, 0409, 046D
<p>QD75M Axis monitor data-3</p> <p>1) 4) 2) 5) 3)</p>	-	-	-
	1)	848 to 849, 948 to 949, 1048 to 1049, 1148 to 1149	0350 to 0351, 03B4 to 03B5, 0418 to 0419, 047C to 047D
	2)	850 to 851, 950 to 951, 1050 to 1051, 1150 to 1151	0352 to 0353, 03B6 to 03B7, 041A to 041B, 047E to 047F
	3)	852 to 853, 952 to 953, 1052 to 1053, 1152 to 1153	0354 to 0355, 03B8 to 03B9, 041C to 041D, 0480 to 0481
	4)	854 to 855, 954 to 955, 1054 to 1055, 1154 to 1155	0356 to 0357, 03BA to 03BB, 041E to 041F, 0482 to 0483
	5)	856, 956, 1056, 1156	0358, 03BC, 0420, 0484
	6)	857, 957, 1057, 1157	0359, 03BD, 0421, 0485
		858, 958, 1058, 1158	035A, 03BE, 0422, 0486
		859, 959, 1059, 1159	035B, 03BF, 0423, 0487
		860, 960, 1060, 1160	035C, 03C0, 0424, 0488
		861, 961, 1061, 1161	035D, 03C1, 0425, 0489
		862, 962, 1062, 1162	035E, 03C2, 0426, 048A
		863, 963, 1063, 1163	035F, 03C2, 0427, 048B
	7)	864 to 869, 964 to 969, 1064 to 1069, 1164 to 1169	0360 to 0365, 03C4 to 03C9, 0428 to 042D, 048C to 0491

Screen example		No.	Buffer memory address	
			DEC	HEX
<div><div>QD75M Axis monitor: data-4</div><div><div>1)</div><div><div>Parameter error No. (BIT 0:OK 1:ERROR)</div><div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div></div></div><div><div>2)</div><div><div>Servo status</div><div><div>Item</div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div></div></div></div></div></div>	1)	870, 970, 1070, 1170	0366, 03CA, 042E, 0492	
	871, 971, 1071, 1171	0367, 03CB, 042F, 0493		
	872, 972, 1072, 1172	0368, 03CC, 0430, 0494		
	873, 973, 1073, 1173	0369, 03CD, 0431, 0495		
	874, 974, 1074, 1174	036A, 03CE, 0432, 0496		
<div><div>QD75M OPR</div><div><div>1)</div><div><div>Axis Travel after NFD ON</div><div><div>1</div><div>2</div><div>3</div><div>4</div></div></div><div><div>2)</div><div><div>Torque limit stored value</div><div><div>1</div><div>2</div><div>3</div><div>4</div></div></div><div><div>3)</div><div><div>Near upper limit</div><div><div>1</div><div>2</div><div>3</div><div>4</div></div></div><div><div>4)</div><div><div>Near lower limit</div><div><div>1</div><div>2</div><div>3</div><div>4</div></div></div><div><div>5)</div><div><div>Setting range</div><div><div>0 to 2147483647</div></div></div></div></div></div></div></div></div>	2)	877, 977, 1077, 1177	036D, 03D1, 0435, 0499	
	3)	878, 978, 1078, 1178	036E, 03D2, 0436, 049A	
	4)	879, 979, 1079, 1179	036F, 03D3, 0437, 049B	
	5)	880, 980, 1080, 1180	0370, 03D4, 0438, 049C	
	-	824 to 825	0338 to 0339	
<div><div>QD75M Speed-position control</div><div><div>1)</div><div><div>SP50 positioning amount</div><div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div></div></div><div><div>2)</div><div><div>SP50 movement amount change register</div><div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div></div></div></div></div></div>	1)	814 to 815	032E to 032F	
	914 to 915	0392 to 0393		
	1014 to 1015	03F6 to 03F7		
	1114 to 1115	045A to 045B		
	2)	1526 to 1527	05F6 to 05F7	
	1626 to 1627	065A to 065B		
	1726 to 1727	06BE to 06BF		
	1826 to 1827	0722 to 0723		
	3)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D	
	4)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D	
	5)	1528, 1628, 1728, 1828	05F8, 065C, 06C0, 0724	
	-	-	-	

Screen example		No.	Buffer memory address																																																										
			DEC	HEX																																																									
<div><div>QD75M Position-speed control</div><div><div>1) <div><div>RSSC speed change register</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div></div><div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div></div><div><div>Setting range</div><div><div>0 to 2000000000 (mm/min)*10⁻⁶</div><div>(inch/min)*10⁻⁶</div><div>(degree/min)*10⁻⁶</div><div>0 to 100000000 (pulse/sec)*1</div></div></div></div><div><div>2) <div><div>Item</div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div></div></div><div><div>Position-speed switching latch</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>3) <div><div>In speed control</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div></div><div><div>4) <div><div>Position-speed switching enable</div><div><div>0:Disable</div><div>1:Enable</div></div></div></div></div></div><tr><td>1)</td><td>1530 to 1531</td><td>05FA to 05FB</td></tr><tr><td rowspan="3"></td><td>1630 to 1631</td><td>065E to 065F</td></tr><tr><td>1730 to 1731</td><td>06C2 to 06C3</td></tr><tr><td>1830 to 1831</td><td>0726 to 0727</td></tr><tr><td>2)</td><td>817, 917, 1017, 1117</td><td>0331, 0395, 03F9, 045D</td></tr><tr><td>3)</td><td>817, 917, 1017, 1117</td><td>0331, 0395, 03F9, 045D</td></tr><tr><td>4)</td><td>1532, 1632, 1732, 1832</td><td>05FC, 0660, 06C4, 0728</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td rowspan="18"><div><div>QD75M Axis control data-1</div><div><div>1) <div><div>New current value</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div></div><div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div></div><div><div>Setting range</div><div><div>-2147433648 (um)*10⁻³</div><div>to 2147433647 (inch)*10⁻³</div><div>(pulse)*1</div><div>0 to 35999999 (degree)*10⁻³</div></div></div></div><div><div>2) <div><div>New speed value</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div></div><div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div></div><div><div>Setting range</div><div><div>0 to 2000000000 (mm/min)*10⁻⁶</div><div>(inch/min)*10⁻⁶</div><div>(degree/min)*10⁻⁶</div><div>0 to 100000000 (pulse/sec)*1</div></div></div></div><div><div><div>Item</div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div></div><div><div>Torq.Boost</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>Step mode</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>Step valid flag</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>Step start information</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>Skip command</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>Use ext. command</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div></div><div><div><div>Set value</div><div><div>1 to 3000%</div><div>0:Dep.unit</div><div>1:data No.</div><div>0:Invalid</div><div>1:Valid</div><div>0:Completed</div><div>1:Continue</div><div>2:Restarts</div><div>0:Completed</div><div>1:Skip</div><div>0:Invalid</div><div>1:Valid</div></div></div></div></div></div><tr><td>1)</td><td>1506 to 1507</td><td>05E2 to 05E3</td></tr><tr><td rowspan="3"></td><td>1606 to 1607</td><td>0646 to 0647</td></tr><tr><td>1706 to 1707</td><td>06AA to 06AB</td></tr><tr><td>1806 to 1807</td><td>070E to 070F</td></tr><tr><td rowspan="3">2)</td><td>1514 to 1515</td><td>05EA to 05EB</td></tr><tr><td>1614 to 1615</td><td>064E to 064F</td></tr><tr><td>1714 to 1715</td><td>06B2 to 06B3</td></tr><tr><td></td><td>1814 to 1815</td><td>0716 to 0717</td></tr><tr><td>3)</td><td>1513, 1613, 1713, 1813</td><td>05E9, 064D, 06B1, 0715</td></tr><tr><td>4)</td><td>1544, 1644, 1744, 1844</td><td>0608, 066C, 06D0, 0734</td></tr><tr><td>5)</td><td>1545, 1645, 1745, 1845</td><td>0609, 066D, 06D1, 0735</td></tr><tr><td>6)</td><td>1546, 1646, 1746, 1846</td><td>060A, 066E, 06D2, 0736</td></tr><tr><td>7)</td><td>1547, 1647, 1747, 1847</td><td>060B, 066F, 06D3, 0737</td></tr><tr><td>8)</td><td>1505, 1605, 1705, 1805</td><td>05E1, 0645, 06A9, 070D</td></tr></div></td></tr></div></div></div>	1)	1530 to 1531	05FA to 05FB		1630 to 1631	065E to 065F	1730 to 1731	06C2 to 06C3	1830 to 1831	0726 to 0727	2)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D	3)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D	4)	1532, 1632, 1732, 1832	05FC, 0660, 06C4, 0728	-	-	-	<div><div>QD75M Axis control data-1</div><div><div>1) <div><div>New current value</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div></div><div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div></div><div><div>Setting range</div><div><div>-2147433648 (um)*10⁻³</div><div>to 2147433647 (inch)*10⁻³</div><div>(pulse)*1</div><div>0 to 35999999 (degree)*10⁻³</div></div></div></div><div><div>2) <div><div>New speed value</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div></div><div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div></div><div><div>Setting range</div><div><div>0 to 2000000000 (mm/min)*10⁻⁶</div><div>(inch/min)*10⁻⁶</div><div>(degree/min)*10⁻⁶</div><div>0 to 100000000 (pulse/sec)*1</div></div></div></div><div><div><div>Item</div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div></div><div><div>Torq.Boost</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>Step mode</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>Step valid flag</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>Step start information</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>Skip command</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>Use ext. command</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div></div><div><div><div>Set value</div><div><div>1 to 3000%</div><div>0:Dep.unit</div><div>1:data No.</div><div>0:Invalid</div><div>1:Valid</div><div>0:Completed</div><div>1:Continue</div><div>2:Restarts</div><div>0:Completed</div><div>1:Skip</div><div>0:Invalid</div><div>1:Valid</div></div></div></div></div></div><tr><td>1)</td><td>1506 to 1507</td><td>05E2 to 05E3</td></tr><tr><td rowspan="3"></td><td>1606 to 1607</td><td>0646 to 0647</td></tr><tr><td>1706 to 1707</td><td>06AA to 06AB</td></tr><tr><td>1806 to 1807</td><td>070E to 070F</td></tr><tr><td rowspan="3">2)</td><td>1514 to 1515</td><td>05EA to 05EB</td></tr><tr><td>1614 to 1615</td><td>064E to 064F</td></tr><tr><td>1714 to 1715</td><td>06B2 to 06B3</td></tr><tr><td></td><td>1814 to 1815</td><td>0716 to 0717</td></tr><tr><td>3)</td><td>1513, 1613, 1713, 1813</td><td>05E9, 064D, 06B1, 0715</td></tr><tr><td>4)</td><td>1544, 1644, 1744, 1844</td><td>0608, 066C, 06D0, 0734</td></tr><tr><td>5)</td><td>1545, 1645, 1745, 1845</td><td>0609, 066D, 06D1, 0735</td></tr><tr><td>6)</td><td>1546, 1646, 1746, 1846</td><td>060A, 066E, 06D2, 0736</td></tr><tr><td>7)</td><td>1547, 1647, 1747, 1847</td><td>060B, 066F, 06D3, 0737</td></tr><tr><td>8)</td><td>1505, 1605, 1705, 1805</td><td>05E1, 0645, 06A9, 070D</td></tr></div>	1)	1506 to 1507	05E2 to 05E3		1606 to 1607	0646 to 0647	1706 to 1707	06AA to 06AB	1806 to 1807	070E to 070F	2)	1514 to 1515	05EA to 05EB	1614 to 1615	064E to 064F	1714 to 1715	06B2 to 06B3		1814 to 1815	0716 to 0717	3)	1513, 1613, 1713, 1813	05E9, 064D, 06B1, 0715	4)	1544, 1644, 1744, 1844	0608, 066C, 06D0, 0734	5)	1545, 1645, 1745, 1845	0609, 066D, 06D1, 0735	6)	1546, 1646, 1746, 1846	060A, 066E, 06D2, 0736	7)	1547, 1647, 1747, 1847	060B, 066F, 06D3, 0737	8)	1505, 1605, 1705, 1805	05E1, 0645, 06A9, 070D
	1)	1530 to 1531	05FA to 05FB																																																										
		1630 to 1631	065E to 065F																																																										
		1730 to 1731	06C2 to 06C3																																																										
		1830 to 1831	0726 to 0727																																																										
	2)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D																																																										
	3)	817, 917, 1017, 1117	0331, 0395, 03F9, 045D																																																										
	4)	1532, 1632, 1732, 1832	05FC, 0660, 06C4, 0728																																																										
	-	-	-																																																										
	<div><div>QD75M Axis control data-1</div><div><div>1) <div><div>New current value</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div></div><div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div></div><div><div>Setting range</div><div><div>-2147433648 (um)*10⁻³</div><div>to 2147433647 (inch)*10⁻³</div><div>(pulse)*1</div><div>0 to 35999999 (degree)*10⁻³</div></div></div></div><div><div>2) <div><div>New speed value</div><div><div>Axis1</div><div>0</div><div>Axis2</div><div>0</div></div><div><div>Axis3</div><div>0</div><div>Axis4</div><div>0</div></div></div><div><div>Setting range</div><div><div>0 to 2000000000 (mm/min)*10⁻⁶</div><div>(inch/min)*10⁻⁶</div><div>(degree/min)*10⁻⁶</div><div>0 to 100000000 (pulse/sec)*1</div></div></div></div><div><div><div>Item</div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div></div><div><div>Torq.Boost</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>Step mode</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>Step valid flag</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>Step start information</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>Skip command</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div><div><div>Use ext. command</div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div></div><div><div><div>Set value</div><div><div>1 to 3000%</div><div>0:Dep.unit</div><div>1:data No.</div><div>0:Invalid</div><div>1:Valid</div><div>0:Completed</div><div>1:Continue</div><div>2:Restarts</div><div>0:Completed</div><div>1:Skip</div><div>0:Invalid</div><div>1:Valid</div></div></div></div></div></div><tr><td>1)</td><td>1506 to 1507</td><td>05E2 to 05E3</td></tr><tr><td rowspan="3"></td><td>1606 to 1607</td><td>0646 to 0647</td></tr><tr><td>1706 to 1707</td><td>06AA to 06AB</td></tr><tr><td>1806 to 1807</td><td>070E to 070F</td></tr><tr><td rowspan="3">2)</td><td>1514 to 1515</td><td>05EA to 05EB</td></tr><tr><td>1614 to 1615</td><td>064E to 064F</td></tr><tr><td>1714 to 1715</td><td>06B2 to 06B3</td></tr><tr><td></td><td>1814 to 1815</td><td>0716 to 0717</td></tr><tr><td>3)</td><td>1513, 1613, 1713, 1813</td><td>05E9, 064D, 06B1, 0715</td></tr><tr><td>4)</td><td>1544, 1644, 1744, 1844</td><td>0608, 066C, 06D0, 0734</td></tr><tr><td>5)</td><td>1545, 1645, 1745, 1845</td><td>0609, 066D, 06D1, 0735</td></tr><tr><td>6)</td><td>1546, 1646, 1746, 1846</td><td>060A, 066E, 06D2, 0736</td></tr><tr><td>7)</td><td>1547, 1647, 1747, 1847</td><td>060B, 066F, 06D3, 0737</td></tr><tr><td>8)</td><td>1505, 1605, 1705, 1805</td><td>05E1, 0645, 06A9, 070D</td></tr></div>	1)	1506 to 1507	05E2 to 05E3		1606 to 1607	0646 to 0647	1706 to 1707	06AA to 06AB	1806 to 1807	070E to 070F	2)	1514 to 1515	05EA to 05EB	1614 to 1615	064E to 064F	1714 to 1715	06B2 to 06B3		1814 to 1815	0716 to 0717	3)		1513, 1613, 1713, 1813	05E9, 064D, 06B1, 0715	4)	1544, 1644, 1744, 1844	0608, 066C, 06D0, 0734	5)	1545, 1645, 1745, 1845	0609, 066D, 06D1, 0735	6)	1546, 1646, 1746, 1846	060A, 066E, 06D2, 0736	7)	1547, 1647, 1747, 1847	060B, 066F, 06D3, 0737	8)	1505, 1605, 1705, 1805	05E1, 0645, 06A9, 070D																					
1)		1506 to 1507	05E2 to 05E3																																																										
		1606 to 1607	0646 to 0647																																																										
		1706 to 1707	06AA to 06AB																																																										
		1806 to 1807	070E to 070F																																																										
2)		1514 to 1515	05EA to 05EB																																																										
		1614 to 1615	064E to 064F																																																										
		1714 to 1715	06B2 to 06B3																																																										
		1814 to 1815	0716 to 0717																																																										
3)		1513, 1613, 1713, 1813	05E9, 064D, 06B1, 0715																																																										
4)		1544, 1644, 1744, 1844	0608, 066C, 06D0, 0734																																																										
5)		1545, 1645, 1745, 1845	0609, 066D, 06D1, 0735																																																										
6)		1546, 1646, 1746, 1846	060A, 066E, 06D2, 0736																																																										
7)		1547, 1647, 1747, 1847	060B, 066F, 06D3, 0737																																																										
8)		1505, 1605, 1705, 1805	05E1, 0645, 06A9, 070D																																																										

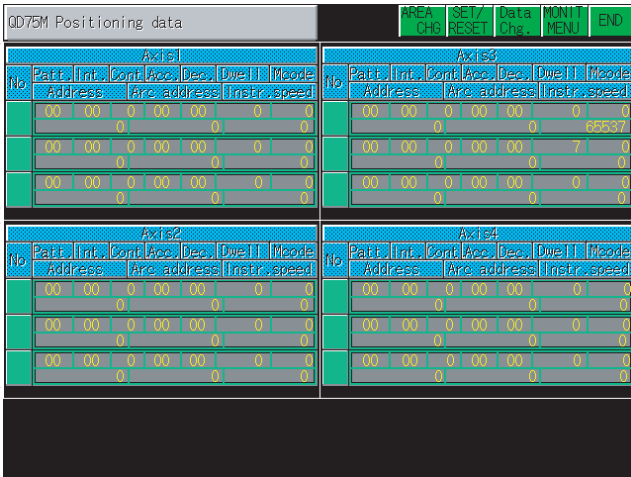
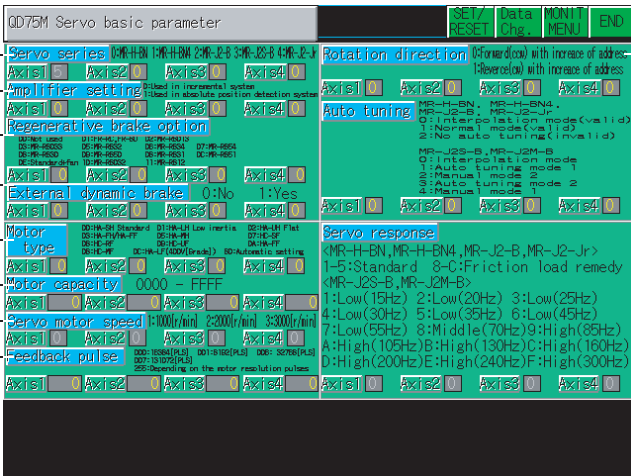
Screen example

QD75M Axis control data-2					SET/RESET	Data Chg.	MONI MENU	END	
Item	Axis1	Axis2	Axis3	Axis4	Item	Axis1	Axis2	Axis3	Axis4
1) Start No.	0	0	0	0	New acc. time	0	0	0	0
2) Starting point No.	~600,7000~7004,9001~9004				New dec. time	0 to 8888808(msec)			
3) Axis error reset	0	0	0	0	TRM in focus OP	0	0	0	0
4) Restart command	0	0	0	0	OPR req. flag OFF	0	0	0	0
	0:Completed	1:Request				0:Completed	1:Request		
	0	0	0	0		0:Completed	1:Request		
	0:Completed	1:Request				0:Completed	1:Request		
5) M code OFF request	0	0	0	0	MPG I/P max.	0	0	0	0
6) JVD time chg. in SPD chg.ON/OFF	0:Completed 1:Request					1 to 100			
7) Speed change request	0	0	0	0	MPG enable	0	0	0	0
	0:Disable	1:Enable			New Torq. value	0	0	0	0
	0:Disable	1:Enable				0:Do not / 1 to limit:Do			
	0	0	0	0		0:Do not / 1 to limit:Do			
	0:Completed	1:Request							

No.	Buffer memory address	
	DEC	HEX
1)	1500, 1600, 1700, 1800	05DC, 0640, 06A4, 0708
2)	1501, 1601, 1701, 1801	05DD, 0641, 06A5, 0709
3)	1502, 1602, 1702, 1802	05DE, 0642, 06A6, 070A
4)	1503, 1603, 1703, 1803	05DF, 0643, 06A7, 070B
5)	1504, 1604, 1704, 1804	05E0, 0644, 06A8, 070C
6)	1512, 1612, 1712, 1812	05E8, 064C, 06B0, 0714
7)	1516, 1616, 1716, 1816	05EC, 0650, 06B4, 0718
8)	1508 to 1509	05E4 to 05E5
	1608 to 1609	0648 to 0649
	1708 to 1709	06AC to 06AD
	1808 to 1809	0710 to 0711
9)	1510 to 1511	05E6 to 05E7
	1610 to 1611	064A to 064B
	1710 to 1711	06AE to 06AF
	1810 to 1811	0712 to 0713
10)	1520, 1620, 1720, 1820	05F0, 0654, 06B8, 071C
11)	1521, 1621, 1721, 1821	05F1, 0655, 06B9, 071D
12)	1522 to 1523	05F2 to 05F3
	1622 to 1623	0656 to 0657
	1722 to 1723	06BA to 06BB
	1822 to 1823	071E to 071F
13)	1524, 1624, 1724, 1824	05F4, 0658, 06BC, 0720
14)	1525, 1625, 1725, 1825	05F5, 0659, 06BD, 0721
1)	1538, 1638, 1738, 1838	0602, 0666, 06CA, 072E
2)	1548, 1648, 1748, 1848	060C, 0670, 06D4, 0738
3)	1549, 1649, 1749, 1849	060D, 0671, 06D5, 0739
4)	1550, 1650, 1750, 1850	060E, 0672, 06D6, 073A
5)	1540, 1640, 1740, 1840, 1541, 1641, 1741, 1841, 1542, 1642, 1742, 1842, 1543, 1643, 1743, 1843	0604, 0668, 06CC, 0730, 0605, 0669, 06CD, 0731, 0606, 066A, 06CE, 0732, 0607, 066B, 06CF, 0733
-	-	-

QD75M Axis control data-3					SET/	Data	MONI	END		
					RESET	Chg.				
	Item	Axis1	Axis2	Axis3	Axis4	Simultaneous starting axis start data				
1)	Pos.change	0	0	0	0	Data No.	Axis1	Axis2	Axis3	Axis4
		0:Completed 1:Request				Axis1	0	0	0	0
2)	Teaching data selection	0	0	0	0	Axis2	0	0	0	0
		0:Address 1: Arc data				Axis3	0	0	0	0
3)	Teaching positioning data No.	0	0	0	0	Axis4	0	0	0	0
		1 to 600				0:Nottarget / 1 to 600:Start data No.				
	Item	Axis1	Axis2	Axis3	Axis4					
4)	ABS direction in degrees	0	0	0	0					
		0:Shortcut 1:Right 2:Left								

Screen example	No.	Buffer memory address	
		DEC	HEX
<div><div>QD75M Axis control data-4</div><div><div>inch movement amount</div><div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div></div><div><div>Setting range</div><div>1 to 65535 (μm)×10⁻¹ [inch]×10⁻⁴ (degree)×10⁻⁴ [pulse]×1</div><div>0: JOG operation</div></div></div><div><div>target position change value (Address)</div><div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div></div><div><div>Setting range</div><div>ABS-INC -2147483648 to 2147483647 (μm)×10⁻¹ [inch]×10⁻⁴ (degree)×10⁻⁴ [pulse]×1</div><div>(+ABS: 0 to 65535 (degree)×10⁻⁴)</div></div></div></div> <div><div>JOG speed</div><div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div></div><div><div>Setting range</div><div>0 to 2000000000 (mm/min)×10⁻¹ (inch/min)×10⁻⁴ (degree/min)×10⁻⁴</div><div>0 to 10000000 (pulse/sec)×1</div></div></div> <div><div>target position change value (Speed)</div><div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div></div><div><div>Setting range</div><div>0 to 2000000000 (mm/min)×10⁻¹ (inch/min)×10⁻⁴ (degree/min)×10⁻⁴</div><div>0 to 10000000 (pulse/sec)×1</div></div></div> <div><div>QD75M Start History</div><div><div>Start History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Start</div><div>Kind</div><div>Time</div><div>Judge</div></div><div><div>0</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>1</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>2</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>3</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>4</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>5</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>6</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>7</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div></div><div><div>Start History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Start</div><div>Kind</div><div>Time</div><div>Judge</div></div><div><div>8</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>9</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>10</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>11</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>12</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>13</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>14</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div><div><div>15</div><div>0</div><div>00</div><div>0</div><div>00 00 00</div><div>0</div></div></div></div> <div><div>QD75M Error & Warning History</div><div><div>Error History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>0</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>1</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>2</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>3</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>4</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>5</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>6</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>7</div><div>0</div><div>0</div><div>00 00 00</div></div></div><div><div>Error History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>8</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>9</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>10</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>11</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>12</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>13</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>14</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>15</div><div>0</div><div>0</div><div>00 00 00</div></div></div><div><div>Warning History (0 to 7)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>0</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>1</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>2</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>3</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>4</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>5</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>6</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>7</div><div>0</div><div>0</div><div>00 00 00</div></div></div><div><div>Warning History (8 to 15)</div><div><div>No.</div><div>Axis</div><div>Code</div><div>Time</div></div><div><div>8</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>9</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>10</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>11</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>12</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>13</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>14</div><div>0</div><div>0</div><div>00 00 00</div></div><div><div>15</div><div>0</div><div>0</div><div>00 00 00</div></div></div></div> <div><div>1)</div><div>1517, 1617, 1717, 1817</div><div>05ED, 0651, 06B5, 0719</div></div> <div><div>2)</div><div>1518 to 1519</div><div>05EE to 05EF</div></div> <div><div>1618 to 1619</div><div>0652 to 0653</div></div> <div><div>1718 to 1719</div><div>06B6 to 06B7</div></div> <div><div>1818 to 1819</div><div>071A to 071B</div></div> <div><div>3)</div><div>1534 to 1535</div><div>05FE to 05FF</div></div> <div><div>1634 to 1635</div><div>0662 to 0663</div></div> <div><div>1734 to 1735</div><div>06C6 to 06C7</div></div> <div><div>1834 to 1835</div><div>072A to 072B</div></div> <div><div>4)</div><div>1536 to 1537</div><div>0600 to 0601</div></div> <div><div>1636 to 1637</div><div>0664 to 0665</div></div> <div><div>1736 to 1737</div><div>06C8 to 06C9</div></div> <div><div>1836 to 1837</div><div>072C to 072D</div></div> <div><div>-</div><div>-</div><div>-</div></div> <div><div>1)</div><div>1212 to 1291</div><div>04BC to 050B</div></div> <div><div>-</div><div>-</div><div>-</div></div> <div><div>1)</div><div>1293 to 1356</div><div>050D to 054C</div></div> <div><div>2)</div><div>1358 to 1421</div><div>054E to 058D</div></div> <div><div>-</div><div>-</div><div>-</div></div>			

Screen example		No.	Buffer memory address	
			DEC	HEX
		1)	2000 to 2002, 2004 to 2012, 2014 to 2022, 2024 to 2029	07D0 to 07D2, 07D4 to 07DC, 07DE to 07E6, 07E8 to 07ED
		2)	8000 to 8002, 8004 to 8012, 8014 to 8022, 8024 to 8029	1F40 to 1F42, 1F44 to 1F4C, 1F4E to 1F56, 1F58 to 1F5D
		3)	14000 to 14002, 14004 to 14012, 14014 to 14022, 14024 to 14029	36B0 to 36B2, 36B4 to 36BC, 36BE to 36C6, 36C8 to 36CD
		4)	20000 to 20002, 20004 to 20012, 20014 to 20022, 20024 to 20029	4E20 to 4E22, 4E24 to 4E2C, 4E2E to 4E36, 4E38 to 4E3D
		-	-	-
		1)	30100, 30200, 30300, 30400	07594, 075F8 0765C, 076C0
		2)	30101, 30201, 30301, 30401	07595, 075F9 0765D, 076C1
		3)	30102, 30202, 30302, 30402	07596, 075FA 0765E, 076C2
		4)	30103, 30203, 30303, 30403	07597, 075FB 0765F, 076C3
		5)	30104, 30204, 30304, 30404	07598, 075FC 07660, 076C4
		6)	30105, 30205, 30305, 30405	07599, 075FD 07661, 076C5
		7)	30106, 30206, 30306, 30406	0759A, 075FE 07662, 076C6
		8)	30107, 30207, 30307, 30407	0759B, 075FF 07663, 076C7
		9)	30108, 30208, 30308, 30408	0759C, 07600 07664, 076C8
		10)	30109, 30209, 30309, 30409	0759D, 07601 07665, 076C9
		11)	30109, 30209, 30309, 30409	0759D, 07601 07665, 076C9

Screen example		No.	Buffer memory address	
			DEC	HEX
<div><div>QD75M Servo regulation parameter(Part1)</div><div><div>1) Position loop gain1 4 = 2000[rad/s]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>2) Speed loop gain1 20 = 3000[rad/s]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>3) Position loop gain2 1 = 1000[rad/s]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>4) Speed loop gain2 20 = 2000[rad/s]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>Load inertia *10³</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>Speed integral compensation 1 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>Feed forward gain 0 = 100[%]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>In-position range</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>E-brake sequence</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 1000[ms]</div><div>AX1S1 AX1S2 AX1S3 AX1S4</div><div>0 = 50000[PLS]</div><</div></div>				

Screen example	No.	Buffer memory address	
		DEC	HEX
<p>QD75M Servo extended parameter(Part2)</p> <p>1) Serial communication baudrate 0: 9600[bps] 1:19200[bps] 2:38400[bps] 3:57600[bps] Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0</p> <p>2) Serial communication response delay 0:Invalid 1:Valid Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0</p> <p>3) Encoder output pulse setting 0:Output pulse setting 1:Division ratio setting Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0</p> <p>4) CRR set condition selection 0:It is necessary to pass through the Z phase after the power on. 1:It is not necessary to pass through the Z phase after the power on. Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0</p>	1) to 4)	30133, 30233, 30333, 30433	075B5, 07619 0767D, 076E1
	5)	30134, 30234, 30334, 30434	075B6, 0761A 0767E, 076E2
	6)	30136, 30236, 30336, 30436	075B8, 0761C 07680, 076E4
	7)	30138, 30238, 30338, 30438	075BA, 0761E 07682, 076E6
	-	-	-
	-	-	-
	-	-	-
<p>QD75M Servo extended parameter 2</p> <p>1) Slight vibration control selection 1 0:1 times 10, 20 times 30, 50 times 60, 80 times Position gain 2 shift amount 0 0 0 0 Speed gain 2 shift amount 0 0 0 0 Speed integral compensation shift amount 0 0 0 0</p> <p>2) Slight vibration control selection 2 0 - 1000[ms] Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0</p> <p>3) Voltage compensation 0 - 100[%] Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0</p> <p>4) Gain changing (0:Invalid RMC, signal from controller 2:Command frequency 3:Drop pulses 4:Model speed) Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0</p> <p>5) Gain changing condition 0 - 9999 Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0</p> <p>6) Gain changing time constant 0 - 100[ms] Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0</p> <p>7) Load moment of inertia ratio 0 - 3000 * 10⁻¹ Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0</p> <p>Position loop gain 2 changing ratio 0-100% Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0</p> <p>Speed loop gain 2 changing ratio 0-100% Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0</p> <p>VEL,INTGR,COMP, gain 2 changing ratio 0 - 1000[%] Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0</p> <p>Encoder output pulses direction 0:Balance 90° A with 0° B 1:Balance 90° A with 0° Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0</p> <p>Notch filter MR-J2S-B, MR-J2M-B Frequency 0: — 01:60[Hz] 02:250[Hz] 03:150[Hz] 04:125[Hz] 05:30[Hz] 06:75[Hz] 07:302.5[Hz] 08:382.5[Hz] 09:500[Hz] 10:650[Hz] 11:304.7[Hz] 12:375[Hz] 13:362.8[Hz] 14:321.4[Hz] 15:300[Hz] 16:281.3[Hz] 17:165.7[Hz] 18:167.5[Hz] 19:180[Hz] 20:173.1[Hz] 21:166.7[Hz] 22:160.1[Hz] 23:155.2[Hz] 24:150[Hz] 25:145.2[Hz] Notch depth 0: -4db 1: -1db 2: -3db 3: -6db Frequency Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0 Notch depth Ax1S1 0 Ax1S2 0 Ax1S3 0 Ax1S4 0</p>	8)	30143, 30243, 30343, 30443	075BF, 07623 07687, 076EB
	2)	30144, 30244, 30344, 30444	075C0, 07624 07688, 076EC
	3)	30145, 30245, 30345, 30445	075C1, 07605 07689, 076ED
	4)	30149, 30249, 30349, 30449	075C5, 07629 0768D, 076F1
	5)	30150, 30250, 30350, 30450	075C6, 0762A 0768E, 076F2
	6)	30151, 30251, 30351, 30451	075C7, 0762B 0768F, 076F3
	7)	30152, 30252, 30352, 30452	075C8, 0762C 07690, 076F4
	8)	30153, 30253, 30353, 30453	075C9, 0762D 07691, 076F5
	9)	30154, 30254, 30354, 30454	075CA, 0762E 07692, 076F5
	10)	30155, 30255, 30355, 30455	075CB, 0762F 07693, 076F6
	11)	30160, 30260, 30360, 30460	075D0, 07634 07698, 076FC
	12)	30161, 30261, 30361, 30461	075D1, 07635 07699, 076FD

6.5.36 QD75MH module monitoring

Screen example		Buffer memory address	
		DEC	HEX
<p>QD75MH Operation Monitor</p> <p>1) Axis current feed val.</p> <p>2) Axis feed rate</p> <p>3) Axis Start No.</p> <p>4) Operation pattern</p> <p>5) Axis Status Standby</p> <p>6) Axis Status Standby</p> <p>7) Axis Status Standby</p> <p>8) Axis Status Standby</p> <p>9) Emergency stop input</p> <p>10) 10</p> <p>11) 11</p> <p>12) 12</p> <p>13) 13</p> <p>14) 14</p> <p>15) 15</p> <p>16) 16</p> <p>17) 17</p>	1)	800, 812	320, 32C
	2)	900, 912	384, 390
	3)	1000, 1012	3E8, 3F4
	4)	1100, 1112	44C, 458
	5)	806 to 809	326 to 329
	6)	906 to 909	38A to 38D
	7)	1006 to 1009	3EE to 3F1
	8)	1106 to 1109	452 to 455
	9)	1431	597
	10)	829, 838	33D, 346
	11)	929, 938	3A1, 3AA
	12)	1029, 1038	405, 40E
	13)	1129, 1138	469, 472
	14)	838	346
	15)	938	3AA
	16)	1038	40E
	17)	1138	472
<p>QD75MH Input/Output Monitor</p> <p>1) 1)</p>	1)	-	-
	-	-	-
<p>QD75MH Basic parameters 1</p> <p>1) 1)</p> <p>2) 2)</p> <p>3) 3)</p> <p>4) 4)</p>	1)	0, 150, 300, 450	0, 96, 12C, 1C2
	2)	2 to 3, 152 to 153, 302 to 303, 452 to 453	2 to 3, 98 to 99, 12E to 12F, 1C4 to 1C5
	3)	1, 151, 301, 451	1, 97, 12D, 1C3
	4)	4 to 5, 154 to 155, 304 to 305, 454 to 455	4 to 5, 9A to 9B, 130 to 131, 1C6 to 1C7
	-	-	-

Screen example	No.	Buffer memory address	
		DEC	HEX
<p>QD75MH Basic parameters 2</p> <p>1) { Speed limit value Axis1 16711680 Axis2 0 Axis3 0 Axis4 0 Setting range 1 to 2000000000 (mm/min)*10⁻³ (inch/min)*10⁻³ (degree/min)*10⁻³ 1 to 500000000 (pulse/sec)*1 Deceleration time 0 Axis1 16 Axis2 0 Axis3 0 Axis4 0 Setting range 1 to 8888800(msec) Acceleration time 0 Axis1 16711680 Axis2 0 Axis3 0 Axis4 0 Setting range 1 to 8888800(msec)</p> <p>2) {</p>	1)	10 to 11, 160 to 161, 310 to 311, 460 to 461	A to B, A0 to A1, 136 to 137, 1CC to 1CD
	2)	12 to 13, 162 to 163, 312 to 313, 462 to 463	C to D, A2 to A3, 138 to 139, 1CE to 1CF
	3)	14 to 15, 164 to 165, 314 to 315, 464 to 465	E to F, A4 to A5, 13A to 13B, 1D0 to 1D1
<p>QD75MH Detailed parameters 1-1</p> <p>1) { Backlash compensation amount Axis1 0 Axis2 0 Axis3 0 Axis4 0 Setting range 0 to 65535 (μm)*10⁻³ (inch)*10⁻³ (degree)*10⁻³ (pulse)*1 Vander pulse generator input selection Axis1 Axis2 Axis3 Axis4 Setting range 0: A-phase/B-phase/multiplied by 4 1: A-phase/B-phase/multiplied by 2 2: A-phase/B-phase/multiplied by 1 3: PL3/3IGN Software stroke upper limit value Item Axis1 Axis2 Axis3 Axis4 Set Range High Limit Axis1 0 Axis2 0 Axis3 0 Axis4 0 0: 0r feed 1: 1Me feed Low Limit Axis1 0 Axis2 0 Axis3 0 Axis4 0 0: valid 1: invalid Values pulse -2147483648 (μm)*10⁻³ (inch)*10⁻³ to 2147483647 (pulse)*1 0 to 35999999 (degree)*10⁻³ Torque limit set value Axis1 Axis2 Axis3 Axis4 0 0 0 0 1 ~ 1000(%)</p> <p>2) {</p> <p>3) {</p> <p>4) {</p> <p>5) {</p> <p>6) {</p> <p>7) {</p>	1)	17, 167, 317, 467	11, A7, 13D, 1D3
	2)	18 to 19, 168 to 169, 318 to 319, 468 to 469	12 to 13, A8 to A9, 13E to 13F, 1D4 to 1D5
	3)	20 to 21, 170 to 171, 320 to 321, 470 to 471	14 to 15, AA to AB, 140 to 141, 1D6 to 1D7
	4)	33	21
	5)	22, 172, 322, 472	16, AC, 142, 1D8
	6)	23, 173, 323, 473	17, AD, 143, 1D9
	7)	26, 176, 326, 476	1A, B0, 146, 1DC
<p>QD75MH Detailed parameters 1-2</p> <p>1) { Mode ON sig W/R timing Speed switching mode Interpolate speed set method Command in position width Axis1 0 Axis2 0 Axis3 0 Axis4 0 Setting range 1 to 2147483647 (μm)*10⁻³ (inch)*10⁻³ (degree)*10⁻³ (pulse)*1 Current feed val during speed control Axis1 0 Axis2 0 Axis3 0 Axis4 0 0: Do Not / 1: Do / 2: Clear(0)</p> <p>2) {</p> <p>3) {</p> <p>4) {</p> <p>5) {</p> <p>6) {</p> <p>7) {</p> <p>8) {</p> <p>9) {</p>	1)	27, 177, 327, 477	1B, B1, 147, 1DD
	2)	28, 178, 328, 478	1C, B2, 148, 1DE
	3)	29, 179, 329, 479	1D, B3, 149, 1DF
	4)	24 to 25, 174 to 175, 324 to 325, 474 to 475	18 to 19, AE to AF, 144 to 145, 1DA to 1DB
	5)	30, 180, 330, 480	1F, B4, 14A, 1E0
	6)	31, 181, 331, 481	20, B5, 14B, 1E1
	7)	34, 184, 334, 484	22, B8, 14E, 1E4
	8)	32, 182, 332, 482	21, B6, 14C, 1E2
	9)	35	23

Screen example		No.	Buffer memory address	
			DEC	HEX
		1)	36 to 37, 186 to 187, 336 to 337, 486 to 487	24 to 25, BA to BB, 150 to 151, 1E6 to 1E7
		2)	38 to 39, 188 to 189, 338 to 339, 488 to 489	26 to 27, BC to BD, 152 to 153, 1E8 to 1E9
		3)	40 to 41, 190 to 191, 340 to 341, 490 to 491	28 to 29, BE to BF, 154 to 155, 1EA to 1EB
		4)	42 to 43, 192 to 193, 342 to 343, 492 to 493	2A to 2B, C0 to C1, 156 to 157, 1EC to 1ED
		5)	44 to 45, 194 to 195, 344 to 345, 494 to 495	2C to 2D, C2 to C3, 158 to 159, 1EE to 1EF
		6)	46 to 47, 196 to 197, 346 to 347, 496 to 497	2E to 2F, C4 to C5, 15A to 15B, 1F0 to 1F1
		7)	48 to 49, 198 to 199, 348 to 349, 498 to 499	30 to 31, C6 to C7, 15C to 15D, 1F2 to 1F3
		8)	50, 200, 350, 500	32, C8, 15E, 1F4
		9)	51, 201, 351, 501	33, C9, 15F, 1F5
		-	-	-
		1)	52, 202, 352, 502	34, CA, 160, 1F6
		2)	53, 203, 353, 503	35, CB, 161, 1F7
		3)	56, 206, 356, 506	38, CE, 164, 1FA
		4)	57, 207, 357, 507	39, CF, 165, 1FB
		5)	58, 208, 358, 508	3A, D0, 166, 1FC
		6)	54 to 55, 204 to 205, 354 to 355, 504 to 505	36 to 37, CC to CD, 162 to 163, 1F8 to 1F9
		7)	59, 209, 359, 509	3B, D1, 167, 1FD
		8)	60 to 61, 210 to 211, 360 to 361, 510 to 511	3C to 3D, D2 to D3, 168 to 169, 1FE to 1FF
		9)	62, 212, 362, 512	3E, D4, 16A, 200
		-	-	-
		1)	82, 232, 382, 532	52, E8, 17E, 214
		2)	83, 233, 383, 533	53, E9, 17F, 215
		3)	86, 236, 386, 536	56, EC, 182, 218
		4)	87, 237, 387, 537	57, ED, 183, 219
		5)	80 to 81, 230 to 231, 380 to 381, 530 to 531	50 to 51, E6 to E7, 17C to 17D, 212 to 213
		6)	84 to 85, 234 to 235, 384 to 385, 534 to 535	54 to 55, EA to EB, 180 to 181, 216 to 217
		7)	88, 238, 388, 538	58, EE, 184, 21A
		8)	89, 239, 389, 539	59, EF, 185, 21B
		-	-	-

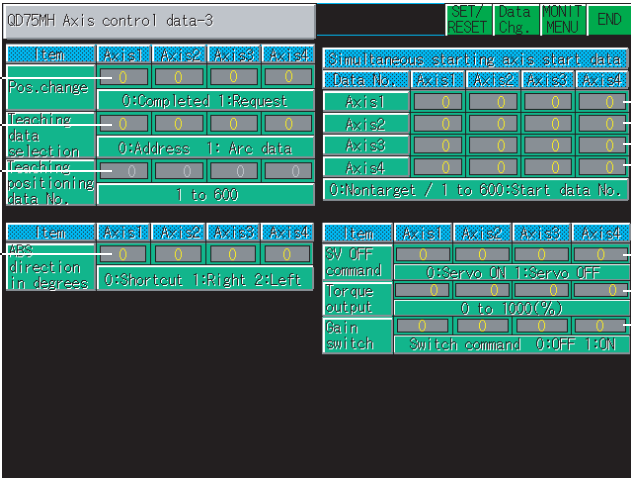
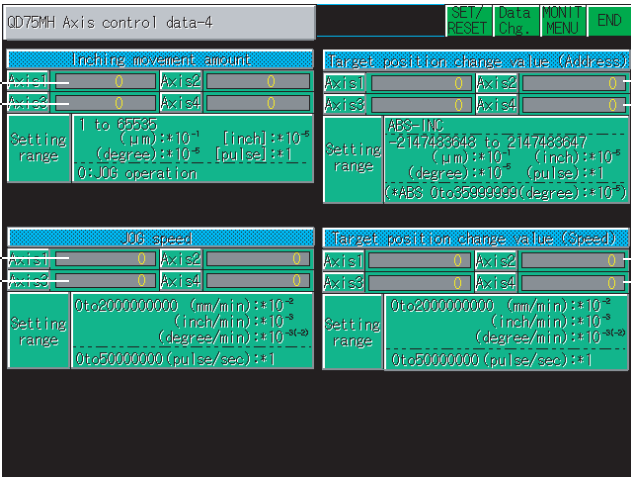
Screen example	No.	Buffer memory address	
		DEC	HEX
	1)	70, 220, 370, 520	46, DC, 172, 208
	2)	71, 221, 371, 521	47, DD, 173, 209
	3)	78, 228, 378, 528	4E, E4, 17A, 210
	4)	72 to 73, 222 to 223, 372 to 373, 522 to 523	48 to 49, DE to DF, 174 to 175, 20A to 20B
	5)	74 to 75, 224 to 225, 374 to 375, 524 to 525	4A to 4B, E0 to E1, 176 to 177, 20C to 20D
	6)	76 to 77, 226 to 227, 376 to 377, 526 to 527	4C to 4D, E2 to E3, 178 to 179, 20E to 20F
	1)	816	330
	2)	916	394
	3)	1016	3F8
	4)	1116	45C
	5)	817	331
	6)	917	395
	7)	1017	3F9
	8)	1117	45D
	1)	818 to 819, 802 to 803	332 to 333, 322 to 323
	2)	918 to 919, 902 to 903	396 to 397, 386 to 387
	3)	1018 to 1019, 1002 to 1003	3FA to 3FB, 3EA to 3EB
	4)	1118 to 1119, 1102 to 1103	45E to 45F, 44E to 44F
	5)	820 to 821, 810 to 811, 812 to 813	334 to 335, 32A to 32B, 32C to 32D
	6)	920 to 921, 910 to 911, 912 to 913	398 to 399, 38E to 38F, 390 to 391
	7)	1020 to 1021, 1010 to 1011, 1012 to 1013	3FC to 3FD, 3F2 to 3F3, 3F4 to 3F5
	8)	1120 to 1121, 1110 to 1111, 1112 to 1113	460 to 461, 456 to 457, 458 to 459
	9)	830, 930, 1030, 1130	33E, 3A2, 406, 46A
	10)	831, 931, 1031, 1131	33F, 3A3, 407, 46B
	-	-	-

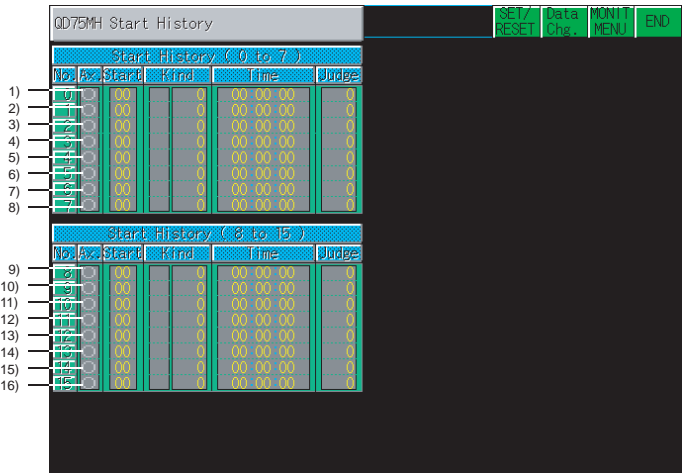
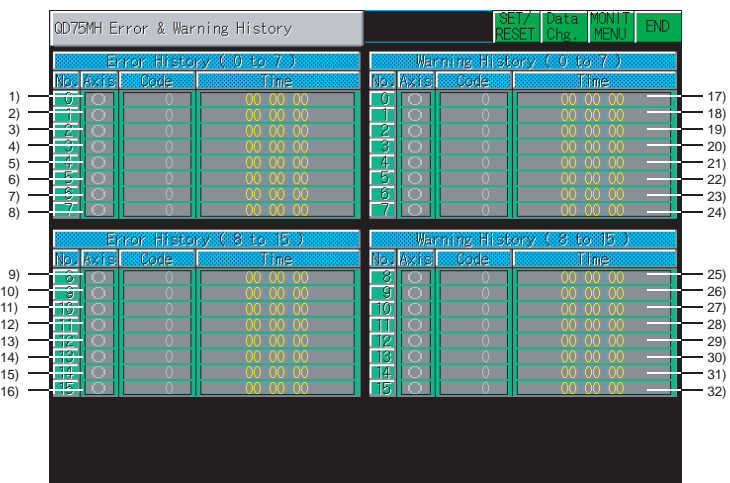
Screen example		No.	Buffer memory address																																																														
			DEC	HEX																																																													
<div>QD75MH Axis monitor data-2</div> <div><div><div>SET/RESET</div><div>Data Chg.</div><div>MONIT</div><div>END</div></div><div><div>Special start data</div><table><thead><tr><th>Axis</th><th>Instr. code</th><th>Instr. para</th><th>Data No.</th></tr></thead><tbody><tr><td>1)</td><td>1</td><td>0</td><td>0</td></tr><tr><td>2)</td><td>2</td><td>0</td><td>0</td></tr><tr><td>3)</td><td>3</td><td>0</td><td>0</td></tr><tr><td>4)</td><td>4</td><td>0</td><td>0</td></tr></tbody></table><div><div>Data being executed</div><table><thead><tr><th>Axis</th><th>1st data pointer</th><th>Pos. data number</th><th>Block No.</th><th>Previous position</th></tr></thead><tbody><tr><td>5)</td><td>1</td><td>0</td><td>0</td><td>0</td></tr><tr><td>6)</td><td>2</td><td>0</td><td>0</td><td>0</td></tr><tr><td>7)</td><td>3</td><td>0</td><td>0</td><td>0</td></tr><tr><td>8)</td><td>4</td><td>0</td><td>0</td><td>0</td></tr></tbody></table></div></div><div><div>Special start repetition counter</div><table><thead><tr><th>Axis1</th><th>Axis2</th><th>Axis3</th><th>Axis4</th></tr></thead><tbody><tr><td>0</td><td>0</td><td>0</td><td>0</td></tr></tbody></table><div>Control system repetition counter</div><table><thead><tr><th>Axis1</th><th>Axis2</th><th>Axis3</th><th>Axis4</th></tr></thead><tbody><tr><td>0</td><td>0</td><td>0</td><td>0</td></tr></tbody></table></div></div>		Axis	Instr. code	Instr. para	Data No.	1)	1	0	0	2)	2	0	0	3)	3	0	0	4)	4	0	0	Axis	1st data pointer	Pos. data number	Block No.	Previous position	5)	1	0	0	0	6)	2	0	0	0	7)	3	0	0	0	8)	4	0	0	0	Axis1	Axis2	Axis3	Axis4	0	0	0	0	Axis1	Axis2	Axis3	Axis4	0	0	0	0	1)	827 to 829	33B to 33D
		Axis	Instr. code	Instr. para	Data No.																																																												
		1)	1	0	0																																																												
		2)	2	0	0																																																												
		3)	3	0	0																																																												
		4)	4	0	0																																																												
		Axis	1st data pointer	Pos. data number	Block No.	Previous position																																																											
		5)	1	0	0	0																																																											
		6)	2	0	0	0																																																											
		7)	3	0	0	0																																																											
8)	4	0	0	0																																																													
Axis1	Axis2	Axis3	Axis4																																																														
0	0	0	0																																																														
Axis1	Axis2	Axis3	Axis4																																																														
0	0	0	0																																																														
2)	927 to 929	39F to 3A1																																																															
3)	1027 to 1029	403 to 405																																																															
4)	1127 to 1129	467 to 469																																																															
5)	834 to 837	342 to 345																																																															
6)	934 to 937	3A6 to 3A9																																																															
7)	1034 to 1037	40A to 40D																																																															
8)	1134 to 1137	46E to 471																																																															
9)	832, 932, 1032, 1132	340, 3A4, 408, 46C																																																															
10)	833, 933, 1033, 1133	341, 3A5, 409, 46D																																																															
		-	-	-																																																													

QD75MH Axis monitor data-3		<div><div>SET/RESET</div><div>Data Chg.</div><div>MONIT</div><div>END</div></div>		
<div><div>Axis</div><div>OPR. Increment</div><div>Actual present val.</div><div>Error counter val.</div></div> <div><div>1)</div><div>2)</div><div>3)</div><div>4)</div></div> <div><div>(μm)×10⁻¹</div><div>(inch)×10⁻⁴</div><div>(degree)×10⁻⁴</div><div>(pulse)×1</div></div>	<div><div>Axis</div><div>Number of motor rotation</div><div>Motor current</div></div> <div><div>5)</div><div>6)</div><div>7)</div><div>8)</div></div> <div><div>(rpm)×10⁻¹</div><div>(%)×10⁻¹</div></div>	<div><div>Axis</div><div>Servo amplifier S/W number</div></div> <div><div>9)</div><div>10)</div><div>11)</div><div>12)</div></div> <div><div>Value is character code.(J193 Code)</div></div>		
		1)	848 to 849, 850 to 851, 852 to 853	350 to 351, 352 to 353, 354 to 355
		2)	948 to 949, 950 to 951, 952 to 953	3B4 to 3B5, 3B6 to 3B7, 3B8 to 3B9
		3)	1048 to 1049, 1050 to 1051, 1052 to 1053	418 to 419, 41A to 41B, 41C to 41D
		4)	1148 to 1149, 1150 to 1151, 1152 to 1153	47C to 47D, 47E to 47F, 480 to 481
		5)	854 to 855, 856 to 857	356 to 357, 358 to 359
		6)	954 to 955, 956 to 957	3BA to 3BB, 3BC to 3BD
		7)	1054 to 1055, 1056 to 1057	41E to 41F, 420 to 421
		8)	1154 to 1155, 1156 to 1157	480 to 481, 482 to 483
		9)	864 to 869	360 to 365
		10)	964 to 969	3C4 to 3C9
		11)	1064 to 1069	428 to 42D
		12)	1164 to 1169	48C to 491
		-	-	-

QD75MH Axis monitor data-4		<div><div>SET/RESET</div><div>Data Chg.</div><div>MONIT</div><div>END</div></div>																																																											
<div><div>Parameter error No.</div><table><thead><tr><th>Axis1</th><th>Axis2</th><th>Axis3</th><th>Axis4</th></tr></thead><tbody><tr><td>0</td><td>0</td><td>0</td><td>0</td></tr></tbody></table><div><div>1 to 18 : PA01 to PA18</div><div>19 to 68 : PB01 to PB49</div><div>69 to 95 : PC01 to PC26</div><div>96 to 127 : PD01 to PD32</div><div>128 to 167 : PE01 to PE40</div><div>168 to 199 : PF01 to PF32</div></div></div> <div><div>[Servo status]</div><table><thead><tr><th>Item</th><th>Ax.1</th><th>Ax.2</th><th>Ax.3</th><th>Ax.4</th></tr></thead><tbody><tr><td>Zero point passed</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Zero speed</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Ready ON</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Servo ON</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Servo alarm</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Inposition</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Torque limit</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Abs. value cleared</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Warning</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></tbody></table><div><div>Item</div><div>Axis1</div><div>Axis2</div><div>Axis3</div><div>Axis4</div></div><div><div>Regenerative load ratio</div><div>0</div><div>0</div><div>0</div><div>0</div></div><div><div>Actual load ratio</div><div>0</div><div>0</div><div>0</div><div>0</div></div><div><div>Peak load ratio</div><div>0</div><div>0</div><div>0</div><div>0</div></div></div>	Axis1	Axis2	Axis3	Axis4	0	0	0	0	Item	Ax.1	Ax.2	Ax.3	Ax.4	Zero point passed	0	0	0	0	Zero speed	0	0	0	0	Ready ON	0	0	0	0	Servo ON	0	0	0	0	Servo alarm	0	0	0	0	Inposition	0	0	0	0	Torque limit	0	0	0	0	Abs. value cleared	0	0	0	0	Warning	0	0	0	0	1)	870, 970, 1070, 1170	366, 3CA, 42E, 492
Axis1	Axis2	Axis3	Axis4																																																										
0	0	0	0																																																										
Item	Ax.1	Ax.2	Ax.3	Ax.4																																																									
Zero point passed	0	0	0	0																																																									
Zero speed	0	0	0	0																																																									
Ready ON	0	0	0	0																																																									
Servo ON	0	0	0	0																																																									
Servo alarm	0	0	0	0																																																									
Inposition	0	0	0	0																																																									
Torque limit	0	0	0	0																																																									
Abs. value cleared	0	0	0	0																																																									
Warning	0	0	0	0																																																									
		2)	876, 976, 1076, 1176	36C, 3D0, 434, 498																																																									
		3)	877, 977, 1077, 1177	36D, 3D1, 435, 499																																																									
		4)	878, 978, 1078, 1178	36E, 3D2, 436, 49A																																																									
		5)	879, 979, 1079, 1179	36F, 3D3, 437, 49B																																																									
		6)	880, 980, 1080, 1180	370, 3D4, 438, 49C																																																									
		-	-	-																																																									

Screen example	No.	Buffer memory address	
		DEC	HEX
	1)	824 to 825	338 to 339
	2)	924 to 925	39C to 39D
	3)	1024 to 1025	400 to 401
	4)	1124 to 1125	464 to 465
	5)	826, 816	33A, 330
	6)	926, 916	39E, 394
	7)	1026, 1016	402, 3F8
	8)	1126, 1116	466, 45C
	1)	814 to 815	32E to 32F
	2)	914 to 915	392 to 393
	3)	1014 to 1015	3F6 to 3F7
	4)	1114 to 1115	45A to 45B
	5)	1526 to 1527, 1626 to 1627	5F6 to 5F7, 65A to 65B
	6)	1726 to 1727, 1826 to 1927	6BE to 6BF, 722 to 723
	7)	817, 917, 1017, 1117	330, 395, 3F9, 45D
	8)	1528, 1628, 1728, 1828	5F8, 65C, 6C0, 724
	1)	1530 to 1531, 1630 to 1631	5FA to 5FB, 65E to 65F
	2)	1730 to 1731, 1830 to 1931	6C2 to 6C3, 726 to 727
	3)	817, 917, 1017, 1117	331, 395, 3F9, 45D
	4)	1532, 1632, 1732, 1832	5FC, 660, 6C4, 728
	-	-	-

Screen example		No.	Buffer memory address	
			DEC	HEX
		1)	1538, 1638, 1738, 1838	602, 670, 6CA, 72E
		2)	1548, 1648, 1748, 1848	60C, 670, 6D4, 738
		3)	1549, 1649, 1749, 1849	60D, 671, 6D5, 739
		4)	1550, 1650, 1750, 1850	60E, 672, 606, 73A
		5)	1540, 1640, 1740, 1840	604, 668, 6CB, 730
		6)	1541, 1641, 1741, 1841	605, 669, 6CD, 731
		7)	1542, 1642, 1742, 1842	606, 66A, 6CE, 732
		8)	1543, 1643, 1743, 1843	607, 66B, 6D0, 733
		9)	1551, 1651, 1751, 1851	60F, 673, 6D7, 73B
		10)	1552 to 1553, 1652 to 1653, 1752 to 1753, 1852 to 1853	610 to 611, 674 to 675, 6D8 to 6D9, 73C to 73D
		11)	1559, 1659, 1759, 1859	617, 67B, 6DF, 743
		-	-	-
		1)	1517, 1617	5ED, 651
		2)	1717, 1817	6B5, 719
		3)	1518 to 1519, 1618 to 1619	5EE to 5EF, 652 to 653
		4)	1718 to 1719, 1818 to 1819	6B6 to 6B7, 71A to 71B
		5)	1534 to 1535, 1634 to 1635	5FE to 5FF, 662 to 663
		6)	1734 to 1735, 1834 to 1835	6C6 to 6C7, 72A to 72B
		7)	1536 to 1537, 1636 to 1637	600 to 601, 664 to 665
		8)	1736 to 1737, 1836 to 1837	6C8 to 6C9, 72C to 72D
		-	-	-

Screen example		Buffer memory address	
No.		DEC	HEX
1)		1212 to 1216	4BC to 4C0
2)		1217 to 1221	4C1 to 4C5
3)		1222 to 1226	4C6 to 4CA
4)		1227 to 1231	4CB to 4CF
5)		1232 to 1236	4D0 to 4D4
6)		1237 to 1241	4D5 to 4D9
7)		1242 to 1246	4DA to 4DE
8)		1247 to 1251	4DF to 4E3
9)		1252 to 1256	4E4 to 4E8
10)		1257 to 1261	4E9 to 4ED
11)		1262 to 1266	4EE to 4F2
12)		1267 to 1271	4F3 to 4F7
13)		1272 to 1276	4F8 to 4FC
14)		1277 to 1281	4FD to 501
15)		1282 to 1286	502 to 506
16)		1287 to 1291	507 to 50B
-		-	-
1)		1293 to 1296	50D to 510
2)		1297 to 1300	511 to 514
3)		1301 to 1304	515 to 518
4)		1305 to 1308	519 to 51C
5)		1309 to 1312	51D to 520
6)		1313 to 1316	521 to 524
7)		1317 to 1320	525 to 528
8)		1321 to 1324	529 to 52C
9)		1325 to 1328	52D to 530
10)		1329 to 1332	531 to 534
11)		1333 to 1336	535 to 538
12)		1337 to 1340	539 to 53C
13)		1341 to 1344	53D to 540
14)		1345 to 1348	541 to 544
15)		1349 to 1352	545 to 548
16)		1353 to 1356	549 to 54C
17)		1358 to 1361	54E to 551
18)		1362 to 1365	552 to 555
19)		1366 to 1369	556 to 559
20)		1370 to 1373	55A to 55D
21)		1374 to 1377	55E to 561
22)		1378 to 1381	562 to 565
23)		1382 to 1385	566 to 569
24)		1386 to 1389	56A to 56D
25)		1390 to 1393	56E to 571
26)		1394 to 1397	572 to 575
27)		1398 to 1401	576 to 579
28)		1402 to 1405	57A to 57D
29)		1406 to 1409	57E to 581
30)		1410 to 1413	582 to 585
31)		1414 to 1417	586 to 589
32)		1418 to 1421	58A to 58D
-		-	-

Screen example

QD75MH Positioning data

APER CHG

SET/RESET

Data Chg.

MONIT MENU

END

Axis1

Axis4

Axis2

Axis4

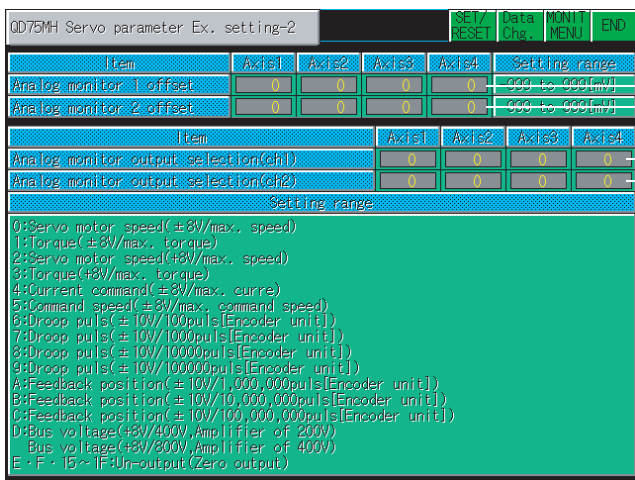
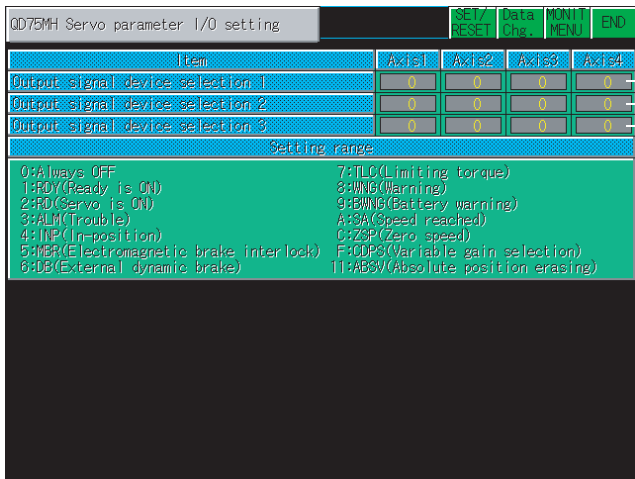
QD75MH Servo parameter Basic setting										DATA CHG	RESET	Data Chg.	MONI MENU	END
Item		Axis1	Axis2	Axis3	Axis4	Setting range								
1)	Parameter set	5	0	0	0	0:Invalid 1:MP-J6-B								
2)	Selection of regenerative brake option	0				00:Not used 02:MP-P8082 03:MP-P812 04:MP-P832 05:MP-P830 06:MP-P850 08:MP-P831 09:MP-P851								
3)	Process selection function	0	0	0	0	0:Invalid 1:Valid								
4)	Emergency stop input	0	0	0	0	0:Valid 1:Invalid								
5)	Gain adjustment mode	0				0:Interpolation 1:Auto tuning1 3:Manual 2:Auto tuning2								
6)	Response	0	0	0	0	1 F 16 F 32 Low F Middle F High 10Hz F 100Hz F 400Hz								
7)	Maximum output current	0	0	0	0	0 to 50000[pulse]								
8)	Maximum output current	0	0	0	0	0:00W 1:0W								
9)	Maximum output current	0	0	0	0	1 to 65536[pulse]								

No.	Buffer memory address	
	DEC	HEX
1)	2000 to 2002, 2004 to 2009	7D0 to 7D2, 7D4 to 7D9
2)	2010 to 2012, 2014 to 2019	7DA to 7DC, 7DE to 7E3
3)	2020 to 2022, 2024 to 2029	7E4 to 7E6, 7E8 to 7ED
4)	8000 to 8002, 8004 to 8009	1F40 to 1F41, 1F44 to 1F49
5)	8010 to 8012, 8014 to 8019	1F4A to 1F4C, 1F4E to 1F53
6)	8020 to 8022, 8024 to 8029	1F54 to 1F56, 1F58 to 1F5D
7)	14000 to 14002, 14004 to 14009	36B0 to 36B2, 36B4 to 36B9
8)	14010 to 14012, 14014 to 14019	36BA to 36BB, 36BE to 36C3
9)	14020 to 14022, 14024 to 14029	36C4 to 36C6, 36C8 to 36CD
10)	20000 to 20002, 20004 to 20009	4E20 to 4E22, 4E24 to 4E29
11)	20010 to 20012, 20014 to 20019	4E2A to 4E2C, 4E2E to 4E33
12)	20020 to 20022, 20024 to 20029	4E34 to 4E36, 4E38 to 4E3D
-	-	-
1)	30100, 30300, 30500, 30700	7594, 765C, 7724, 77EC
2)	30102, 30302, 30502 30702	7596, 765E, 7726, 77EE
3)	30103, 30303, 30503, 30703	7797, 765F, 7727, 77EF
4)	30104, 30304, 30504, 30704	7798, 7660, 7728, 77F0
5)	30108, 30308, 30508, 30708	759C, 7664, 772C, 77F4
6)	30109, 30309, 30509, 30709	759D, 7665, 772D, 77F5
7)	30110, 30310, 30510, 30710	7591, 7666, 772E, 77F6
8)	30114, 30314, 30514, 30714	75A2, 766A, 7732, 77FA
9)	30115, 30315, 30515, 30715	75A3, 766B, 7733, 77FB
-	-	-

Screen example						No.	Buffer memory address		
							DEC	HEX	
QD75MH Servo parameter Gain/Filter-1						SET/ Data MONIT RESET Chg. MENU END	1)	30119, 30319, 30519, 30719	75A7, 766F, 7737, 77FF
1)	Filter tuning mode	0	0	0	0	0:Filter OFF 1:Filter tuning 2:Manual	2)	30120, 30320, 30520 30720	75A8, 7670, 7738, 7800
2)	Vibration suppression control tuning mode	0	0	0	0	0:Vibration control OFF 1:Vibration ctrl tuning 2:Manual	3)	30122, 30322, 30522, 30722	75AA, 7672, 773A, 7802
3)	Feed forward gain	0	0	0	0	0 to 100[%]	4)	30124, 30324, 30524, 30724	75AC, 7674, 773C, 7804
4)	Feed forward gain	0	0	0	0	0 to 3000($\times 10^{-4}$)[times]		5)	30125, 30325, 30525, 30725	75AD, 7675, 773D, 7805
5)	Motor stop gain	0	0	0	0	1 to 2000[rad/s]	6)		30126, 30326, 30526, 30726	75AE, 7676, 773E, 7806
6)	Motor stop gain	0	0	0	0	1 to 1000[rad/s]		7)	30127, 30327, 30527, 30727
7)	Motor stop gain	0	0	0	0	20 to 50000[rad/s]	8)		30128, 30328, 30528, 30728
8)	Motor stop gain	5	0	0	0	1 to 10000($\times 10^{-4}$)[ms]		9)	30129, 30329, 30529, 30729	75B1, 7679, 7741, 7809
9)	Motor stop gain	0	0	0	0	0 to 1000($\times 10^{-4}$)[ms]	10)		30131, 30331, 30531, 30731	75B3, 767B, 7743, 780B
10)	Motor stop gain	0	0	0	0	100 to 4500[Hz]		11)	30133, 30333, 30533, 30733	75B5, 767D, 7745, 780D
11)	Motor stop gain	0	0	0	0	100 to 4500[Hz]	12)		30136, 30336, 30536, 30736	75B8, 7680, 7748, 7810
12)	Motor stop gain	0	0	0	0	100 to 18000[rad/s]		13)	30141, 30341, 30541, 30741	75BD, 7685, 774D, 7815
13)	Low pass filter selection	0	0	0	0	0:Automatic setting 1:Manual setting	-		-

QD75MH Servo parameter Gain/Filter-2						SET/ Data MONIT RESET Chg. MENU END	1)	30132, 30332, 30532, 30732	75B4, 767C, 7744, 780C
1)	Notch depth selection	0	0	0	0	0 1 2 3 Deep ← → Shallow -40dB -14dB -8dB -4dB	3)	30134, 30334, 30534, 30734	75B6, 767E, 7746, 780E
2)	Notch width selection	0	0	0	0	0 1 2 3 Narrow ← → Wide $\alpha=2$ $\alpha=3$ $\alpha=4$ $\alpha=5$	5)		
3)	Resonance suppression filter 2	0	0	0	0	0:Invalid 1:Valid	6)	30137, 30337, 30537, 30737	75B9, 7681, 7749, 7811
4)	Notch depth selection	0	0	0	0	0 1 2 3 Deep ← → Shallow -40dB -14dB -8dB -4dB	7)	30138, 30338, 30538, 30738	75BA, 7682, 774A, 7812
5)	Notch width selection	0	0	0	0	0 1 2 3 Narrow ← → Wide $\alpha=2$ $\alpha=3$ $\alpha=4$ $\alpha=5$	8)	30142, 30342, 30542, 30742	75BE, 7686, 774E, 7816
6)	Vibration freq.	0	0	0	0	1 to 1000($\times 10^{-4}$)[Hz]	9)		
7)	Vibration freq.	0	0	0	0	1 to 1000($\times 10^{-4}$)[Hz]			
8)	Vibration freq.	0	0	0	0	0:Invalid 1:Valid			
9)	PI-PID switch-over selection	0	0	0	0	0:PI control is valid. 3:PID control is always valid.	-	-	-

Screen example						No.	Buffer memory address		
							DEC	HEX	
QD75MH Servo parameter Gain/Filter-3									
					SET/ Data MONI END RESET Chg. MENU				
	Item	Axis1	Axis2	Axis3	Axis4	Setting range			
1)	Gain switch resolution	0	0	0	0	0 to 9999	1)	30145, 30345, 30545, 30745	75C1, 7689, 7751, 7819
2)	Gain switch delay time	0	0	0	0	0 to 100[ms]	2)	30146, 30346, 30546, 30746	75C2, 768A, 7752, 781A
3)	Load inertia ratio to gain switch servo	0	0	0	0	0 to 3000(×10 ⁻³)	3)	30147, 30347, 30547, 30747	75C3, 768B, 7753, 781B
4)	Position loop gain	0	0	2	0	1 to 2000[rad/s]	4)	30148, 30348, 30548, 30748	75C4, 768C, 7754, 781C
5)	Speed loop gain	0	0	0	0	20 to 50000[rad/s]	5)	30149, 30349, 30549, 30749	75C5, 768D, 7755, 781D
6)	Speed feedback compensation	0	0	0	0	1 to 50000(×10 ⁻³)[ms]	6)	30150, 30350, 30550, 30750	75C6, 768E, 7756, 781E
7)	Vibration freq. setup	0	0	0	0	1 to 1000(×10 ⁻³)[Hz]	7)	30151, 30351, 30551, 30751	75C7, 768F, 7757, 781F
8)	Resonance freq. setup	0	0	0	0	1 to 1000(×10 ⁻³)[Hz]	8)	30152, 30352, 30552, 30752	75C8, 7690, 7758, 7820
	Item	Axis1	Axis2	Axis3	Axis4		9)	30144, 30344, 30544, 30744	75C0, 7688, 7750, 7818
	Gain changing selection	0	0	0	0		-	-	-
	00:Invalid 01:Control command by the controller is effective. 02:Command frequency is more than P627. 03:(Motor encoder unit)Droop pulse is more than P627. 04:Model speed is more than P627. 12:Command frequency is less than P627. 13:(Motor encoder unit)Droop pulse is less than P627. 14:Model speed is less than P627.								
QD75MH Servo parameter Ex. setting-1									
						SET/ Data MONI END RESET Chg. MENU			
	Item	Axis1	Axis2	Axis3	Axis4	Setting range			
1)	Encoder pulse	0	0	0	0	1 to 200[rev]	1)	30164, 30364, 30564, 30764	75D4, 769C, 7764, 782C
2)	Encoder pulse	0	0	0	0	0 to 1000[ms]	2)	30165, 30365, 30565, 30765	75D5, 769D, 7765, 782D
3)	Encoder pulse output direction selection	0	0	0	0	0:0CW 1:CCW (progress to A phases 90°)	3)	30166, 30366, 30566, 30766	75D6, 769E, 7766, 782E
4)	Encoder pulse output setting selection	0	0	0	0	0:Output pulse dgn. 1:Division ratio setting	4)	30167, 30367, 30567, 30767	75D7, 769F, 7767, 782F
5)	Function selection 01	0	0	0	0	0:2-wire 1:4-wire	5)	30168, 30368, 30568, 30768	75D8, 76A0, 7768, 7830
6)	Serial encoder cable	0	0	0	0	0:Invalid 1:Valid	6)	30170, 30370, 30570, 30770	75DA, 76A2, 776A, 7832
7)	Function selection 02	0	0	0	0	0:Invalid 1:Valid			
	Motor-less operation	0	0	0	0	0 to 10000[rev/min]			

Screen example	No.	Buffer memory address	
		DEC	HEX
	1)	30174, 30374, 30574, 30774	75DE, 76A6, 776E, 7836
	2)	30175, 30375, 30575, 30775	75DF, 76A7, 776F, 7837
	3)	30172, 30372, 30572, 30772	75DC, 76A4, 776C, 7834
	4)	30173, 30373, 30573, 30773	75DD, 76A5, 776D, 7835
	-	-	-
	1)	30202, 30402, 30602, 30802	75FA, 76C2, 778A, 7852
	2)	30203, 30403, 30603, 30803	75FB, 76C3, 778B, 7853
	3)	30204, 30404, 30604, 30804	75FC, 76C4, 778C, 7854
	-	-	-

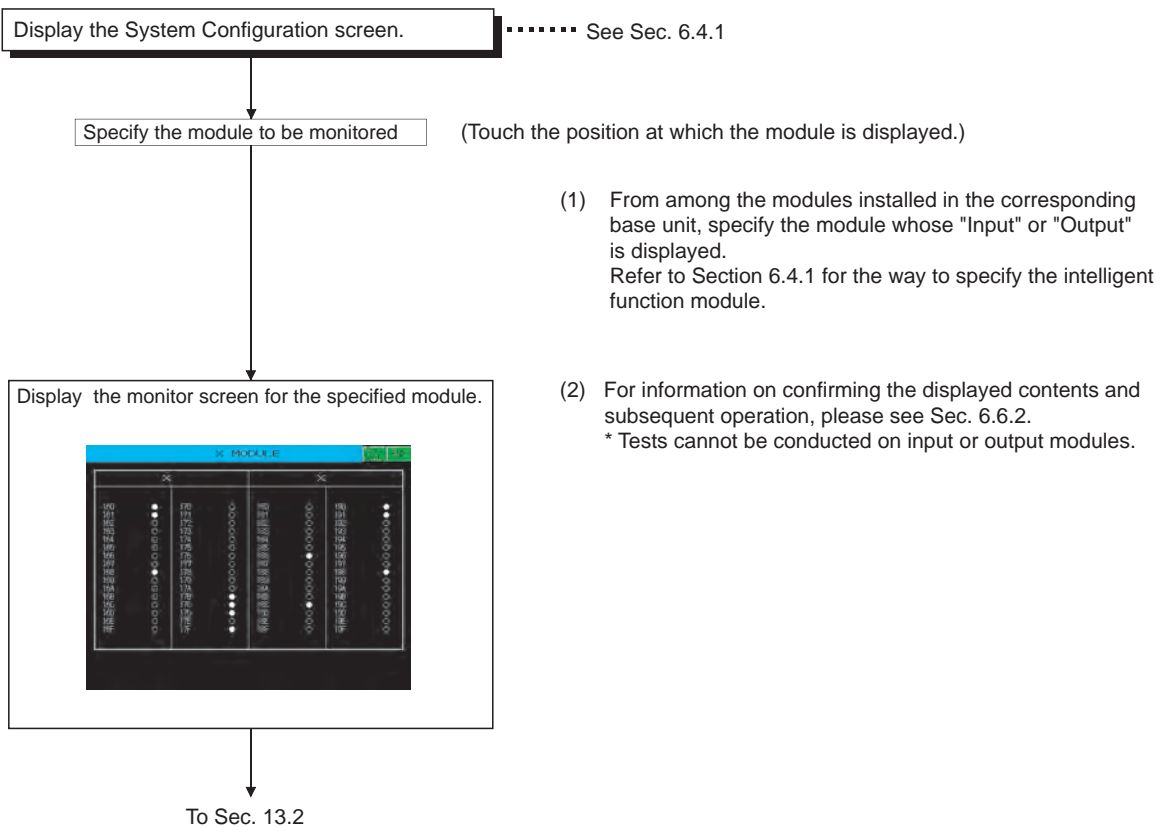
6.6 Operating I/O Module Monitor Screen

This section describes the operation of the various screens in the intelligent module monitor function, when monitoring input or output modules.

6.6.1 Specifying the module to be monitored

This section describes how to start monitoring for an input or output module with the intelligent module monitor function.

Operation procedure



6.6.2 Monitor screen configuration and key functions

This section describes the configuration of monitor screens displayed by specifying the input module on the system configuration screen, and explains the functions of keys displayed on the screen.

1 Displayed contents (for an input module)

1)

2)

3)

4)

×

MODULE

Sys.
Conf.

END

×		×					
160	●	170	○	180	○	190	●
161	○	171	○	181	○	191	○
162	○	172	○	182	○	192	○
163	○	173	○	183	○	193	○
164	○	174	○	184	○	194	○
165	○	175	○	185	○	195	○
166	○	176	○	186	○	196	○
167	○	177	○	187	○	197	○
168	○	178	○	188	○	198	○
169	○	179	○	189	○	199	○
16A	○	17A	○	18A	○	19A	○
16B	○	17B	○	18B	○	19B	○
16C	○	17C	○	18C	○	19C	○
16D	○	17D	○	18D	○	19D	○
16E	○	17E	○	18E	○	19E	○
16F	○	17F	○	18F	○	19F	○

The statuses of input and output signals are displayed after they are read out from the corresponding module.
(The OS executes it automatically.)

Statuses for up to 64 points can be displayed.

Signal statuses:

● : ON
○ : OFF

Item	Description
1)	Displays the type of object module (input or output module).
2)	Displays the name of the signal being monitored (X or Y).
3)	Displays the number and status of the I/O signal.
4)	Displays keys used for the operations on the monitor screen shown in 2 . (Touch input)

2 Key functions

The table below shows the functions of keys that are used for the operations on the monitor screen.

Key	Function
END	Closes the monitoring and returns the screen to the one for starting the intelligent module monitor.
Sys. Conf.	Closes the current monitor and returns to the System Configuration screen.

6.7 Error Messages and Corrective Action

This section describes the error messages displayed when the intelligent module monitor is executed, and corrective action.

Error message	Description	Corrective action
Communication channel setup error	There is no channel for communication.	Check that the channel number is correctly set in the Communication Settings.
Communications error	Communication could not be established with the PLC CPU.	Check the connection status between the PLC CPU and the GOT (disconnected or cut cables). Has an error occurred in the PLC CPU?
Monitor Data Can Not Find	The special data (intelligent module monitor data) has not been downloaded to the GOT.	Download the special data (intelligent module monitor data) to the GOT.

MEMO

[illegible]

7. NETWORK MONITOR



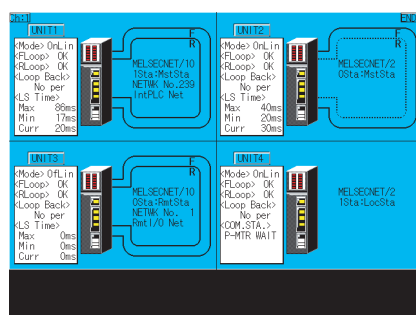
7.1 Features

The network monitor function enables the GOT to monitor and display the statuses of the MELSECNET/H, MELSECNET/10, MELSECNET(II), and CC-Link IE controller networks. The features of the network monitor are described below.

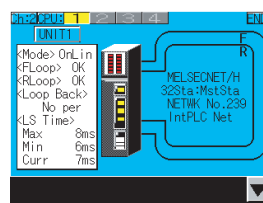
- 1 Selectable from detailed monitoring or other station monitoring for a desired network by the line monitor

The line monitor enables you to monitor the statuses of all network lines connected to the host.

In addition, you can also perform detailed monitoring of a desired network and monitoring of other stations by touch input on the line monitor.



(GOT with VGA or higher resolution)



(GOT with QVGA resolution)

- 2 Monitoring available for the detailed network information with the detailed monitor

Dedicated monitor screens are displayed according to the network type of the connected host.

Network type: MELSECNET(II), master station

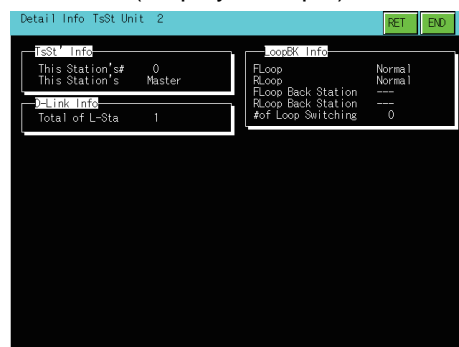
MELSECNET(II), local station

MELSECNET/10 and MELSECNET/H, control station and normal station

MELSECNET/10 and MELSECNET/H, remote master station

CC-Link IE controller network, control station and normal station

(Display example)

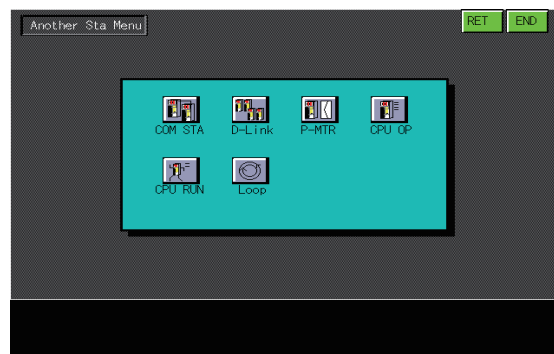


3 Monitoring available for other stations statuses with the other station monitor

You can monitor the following statuses of other stations connected to the network.

- Communication status of each station
- Data link status of each station
- Parameter status of each station
- CPU action status of each station
- CPU RUN status of each station
- Loop status of each station

Other station monitor menu



Other station communication status monitor



7.2 Specifications

7.2.1 System configuration

This section describes the system configuration of the network monitor.

For connection type settings and precautions regarding the communication unit/cable and connection type, see the following manual.

 GOT1000 Series Connection Manual

1 Target controller

Controller
QCPU (Q mode)
QnACPU
ACPU/QCPU (A mode)
Motion controller (A series)*1

*1 Monitoring is not possible when the target CPU is a motion controller (Q series).

2 Connection type

(1) When the GOT is connected to a QCPU (Q mode), QnACPU or motion controller CPU

(○: Available, △: Partly restricted, ×: Unavailable)

Function		Connection type between GOT and controller							
Name	Description	Bus connection	DirectCPU connection	Computer link connection	Ethernet connection	MELSECNET/H connection, MELSECNET/10 connection	CC-Link IE*1	CC-Link connection	
								ID*2	G4*3
Network monitor	Monitors the statuses of the following networks. <ul style="list-style-type: none">MELSECNET/H networkMELSECNET/10 networkMELSECNET(II) networkCC-Link IE controller network	○	○	○	○	△*4	○	○	○

*1 Indicates the CC-Link IE controller network connection.

*2 Indicates CC-Link connection (Intelligent device station).

*3 Indicates CC-Link connection (via G4).

*4 When the GOT is connected to the MELSECNET/H or MELSECNET/10, use a QCPU and a network module (QJ71LP21, QJ71LP21-25, QJ71LP21S-25, QJ71LP21G, or QJ71BR11) of function version B or a later version.

(2) When the GOT is connected to an ACPU/QCPU (A mode)

(○ : Available, △ : Partly restricted, × : Unavailable)

Function		Connection type between GOT and controller						
Name	Description	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	MELSECNET/10 connection	CC-Link connection	
							ID ^{*1}	G4 ^{*2}
Network monitor	Monitoring the network status of MELSECNET/H, MELSECNET/10 and MELSECNET(II)	○	○	△ ^{*3}	○	○	○	○

*1 Indicates CC-Link connection (Intelligent device station).

*2 Indicates CC-Link connection (via G4).

*3 Monitoring is not possible when the target CPU is AnUCPU and a MELSECNET/10 network module is used.

3 Required option OS and option function board

The option OS and option function board shown below are required.

Option OS	OS memory space (user area)			Option function board		
	GT16		GT15	GT16	GT15	
	Built-in flash memory (ROM)	User memory (RAM)				
Network monitor	210KB	370KB	324KB	Not required	GT15-FNB, GT15-QFNB16M, GT15-QFNB48M,	GT15-QFNB, GT15-QFNB32M, GT15-MESB48M

(1) Option OS

Install the option OS in the above table to the GOT.

Refer to the following manual for the procedure for installing the option OS.

 GT Designer2 Version □ Basic Operation/Data Transfer Manual (8. TRANSFERRING DATA)

(2) OS memory space

The available memory space shown in the table above is required in the user area to install the option OS to the GOT.

Refer to the following manual for the procedure for checking the available memory space of the user area and information about the data using other user areas.

 GT Designer2 Version □ Basic Operation/Data Transfer Manual (8. TRANSFERRING DATA)

(3) Option function board

(a) For GT16

No option function board is required.


(b) For GT15

Mount one of the option function boards in the above table on the GOT.

For the GOTs with a built-in option function board, refer to the following.

 1.1.2 Hardware and OS' required for each function

For how to mount an option function board on the GOT, refer to the following manual.

 GT15 User's Manual (8.10 Option Function Board)

7.2.2 Network information that can be monitored

The network information that can be monitored with the network monitor and the link types are as follows.

(○ : Can be monitored, × : Cannot be monitored)

Function		Network Information	MELSEC NET(II) master station	MELSEC NET(II) local station	MELSEC NET/10, MELSEC NET/H control station	MELSEC NET/10, MELSEC NET/H normal station	MELSEC NET/10, MELSEC NET/H remote master station	CC-Link IE control station ^{*3}	CC-Link IE normal station ^{*3}
Line monitor	Network category display		○	○	○	○	○	○	○
	Network number display		×	×	○	○	○	○	○
	Station number display		○	○	○	○	○	○	○
	Host operation mode		○	○	○	○	○	○	○
	Host loop line status		○	○	○	○	○	○	○
	Loopback execution status		○	○	○	○	○	○	○
	Link scan time display		○	×	○	○	○	○	○
	Data link system loop status		○	×	○	○	○	○	○
	Host communication status		×	○ ^{*1}	×	×	×	×	×
Detailed monitor	Host information	Host number	○	○	○	○	○	○	○
		Host	○	○	×	×	×	×	×
		Network number	×	×	○	○	○	○	○
		Group number	×	×	○	○	×	○	○
	Control station information	Specified control station	×	×	○	○	×	○	○
		Current control station	×	×	○	○	×	○	○
		Communication information	×	×	○	○	×	○	○
		Sub-control-station link	×	×	○	○	×	○	○
		Remote-I/O-master-station station number	×	×	○	○	×	○	○
	Data link information	Total of linked stations	○	○	○	○	○	○	○
		Largest connected stations	×	×	○	○	○	○	○
		Largest data-linked station	×	×	○	○	○	○	○
		Communication status	×	○	○	○	○	○	○
		Causes of interrupted communication	×	×	○	○	○	○	○
		Causes of data link stoppage	×	×	○	○	○	○	○
	Constant link scan	Constant link scan	×	×	○	○	○	○	○
	BWY receive	BWY from the master station	×	○	×	×	×	×	×
	BW receive	BW from the master station in the higher loop	×	○	×	×	×	×	×

(Continued to next page)

Function	Network Information	MELSECNET (II) master station	MELSECNET (II) local station	MELSECNET T/10, MELSECNET T/H control station	MELSECNET T/10, MELSECNET T/H normal Station	MELSECNET T/10, MELSECNET T/H remote master station	CC-Link IE control station ^{*3}	CC-Link IE normal station ^{*3}
Detailed monitor	Loopback	Forward loop status	○	○	○ ^{*2}	○ ^{*2}	○ ^{*2}	○ ^{*4}
		Reverse loop status	○	○	○ ^{*2}	○ ^{*2}	○ ^{*2}	○ ^{*4}
		Loopback station (forward loop)	○	×	○ ^{*2}	○ ^{*2}	○ ^{*2}	○ ^{*4}
		Loopback station (reverse loop)	○	×	○ ^{*2}	○ ^{*2}	○ ^{*2}	○ ^{*4}
		Loop switching frequency	○	×	○ ^{*2}	○ ^{*2}	○ ^{*2}	○
	Host status	Parameter settings	×	×	○	○	×	○
		Designation of reserved station	×	×	○	○	○	○
		Communications mode	×	×	○	○	○	○
		Designation of transmission	×	×	○ ^{*2}	○ ^{*2}	○ ^{*2}	○
		Transmission status	×	×	○ ^{*2}	○ ^{*2}	○ ^{*2}	○
Other station monitor	Communication status of each station	○	×	○	○	○	○	○
	Communications status of each station	×	×	○	○	○	○	○
	Parameter status of each station	○	×	○	○	○	○	○
	CPU action status of each station	○	○	○	○	×	○	○
	CPU RUN status of each station	○	○	○	○	×	○	○
	Loop status of each station	○	×	○ ^{*2}	○ ^{*2}	○ ^{*2}	×	×

*1 Monitoring is only possible when connected to a MELSECNET(II) local station.

*2 Monitoring is possible only when using a MELSECNET/H or MELSECNET/10 loop system.

*3 Indicates the CC-Link IE controller network connection.

*4 The loop names vary depending on the network system to be monitored as shown below.

MELSECNET/H, MELSECNET/10, MELSECNET(II) network systems	CC-Link IE controller network
Forward loop	OUT-side loop
Reverse loop	IN-side loop

7.2.3 Access range

In bus connection, direct CPU connection, computer link connection, or Ethernet connection, only the host station can be monitored.

In MELSECNET/H connection or MELSECNET/10 connection, only the control station can be monitored.

In CC-Link connection (Intelligent device station), only the master station can be monitored.

In CC-Link connection (via G4), only the host and master stations can be monitored.

When the GOT is connected to the remote I/O station in MELSECNET/H network system, no stations can be monitored.

The GOT cannot monitor stations on the MELSECNET/G network system.

The access range other than above is the same as the access range when the GOT is connected to a controller.

Refer to the following manual for details of the access range.



GT Designer2 Version □ Screen Design Manual (2.7 Controllers that can be monitored and the Access Range)

7.2.4 Precautions

(1) Station monitored as the host

The station monitored as the host differs depending on the connection type.

Connection type	Station monitored as the host
Bus connection, direct CPU connection, computer link connection	Connected station (target)
Ethernet connection	Station set as the host with the Ethernet setting of GT Designer2
MELSECNET/H connection, MELSECNET/10 connection CC-Link IE controller network connection	Control station
CC-Link connection (Intelligent device station), CC-Link connection (Via G4)	Master station

(2) When the network monitor cannot be displayed correctly

The network monitor cannot be displayed correctly in the following cases.

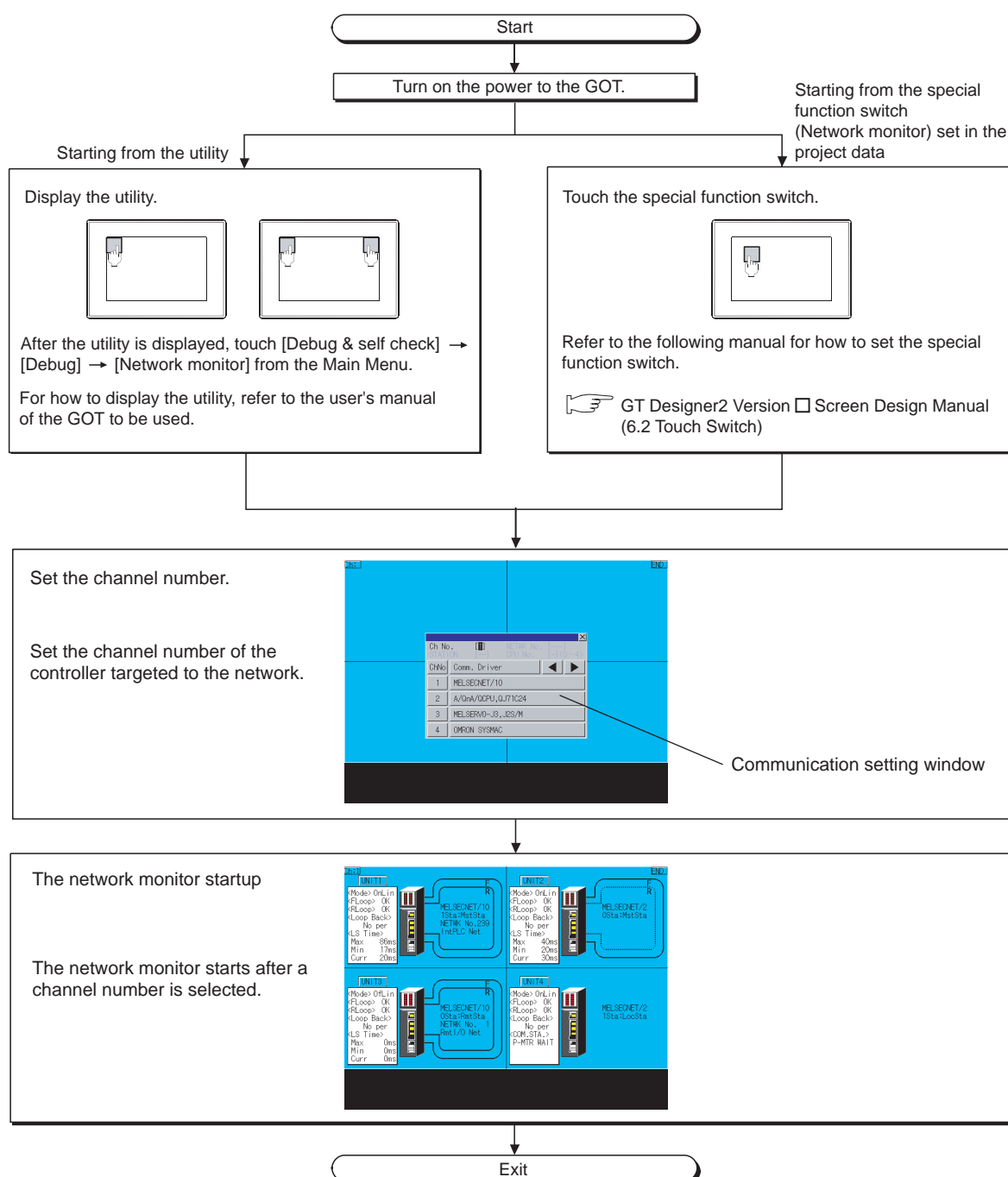
- (a) When the network module is performing offline testing
The network monitor cannot be displayed correctly during offline testing.
Set the network module mode to online.
- (b) When the network parameter has been changed
The network monitor cannot be displayed correctly when the network parameter is changed.
Restart the network monitor.
- (c) When there is a network parameter error
The network monitor cannot be displayed correctly when there is a network parameter error.
Review the network parameter.
- (d) When the network parameter has not been set to the QCPU
The network monitor cannot be displayed correctly when the network parameter is not set to the QCPU.
Be sure to set the network parameter when monitoring the network with the GOT.

- (e) When changing the head addresses on CPU side to which refresh parameter is set
The Network monitor cannot be displayed correctly if the SB and SW head addresses of CPU side are changed while refresh parameter is set in the network parameter for the QCPU.
To monitor the network with the GOT, set the head addresses of SB and SW on CPU side to default.
 - (f) When mounting MELSECNET/H network module and MELSECNET/G network module on same base unit
The GOT cannot monitor the network status.
For monitoring the network status, execute the network diagnostics with GX Developer.
- (3) When monitoring MELSECNET/H
Even if a network module on the MELSECNET/H is being monitored, a MELSECNET/10 display is provided in either of the following cases:
- The normal station has been started due to a communication error (cable disconnection, etc.)
 - The monitor target is the remote master station.
- (4) When monitoring MELSECNET(II)
When connected to a QnACPU and the master station of the MELSECNET(II), monitoring cannot be done with the keyword being defined.
- (5) When the CPU type of the connection target of the GOT is AnNCPU or AnACPU
Even when using the network module of the MELSECNET/10, the network information that can be monitored is the content of the MELSECNET(II).

7.3 Display

1 Operations for display

This section describes the flow until the operation screen for the network monitor is displayed after the network monitor (Option OS) is installed in the GOT.





(1) How to display the utility

For how to display the utility, refer to the following.



GT16 User's manual (8.3 Utility Display)

GT15 User's manual (9.3 Utility Display)

(2) Displaying communication setting window

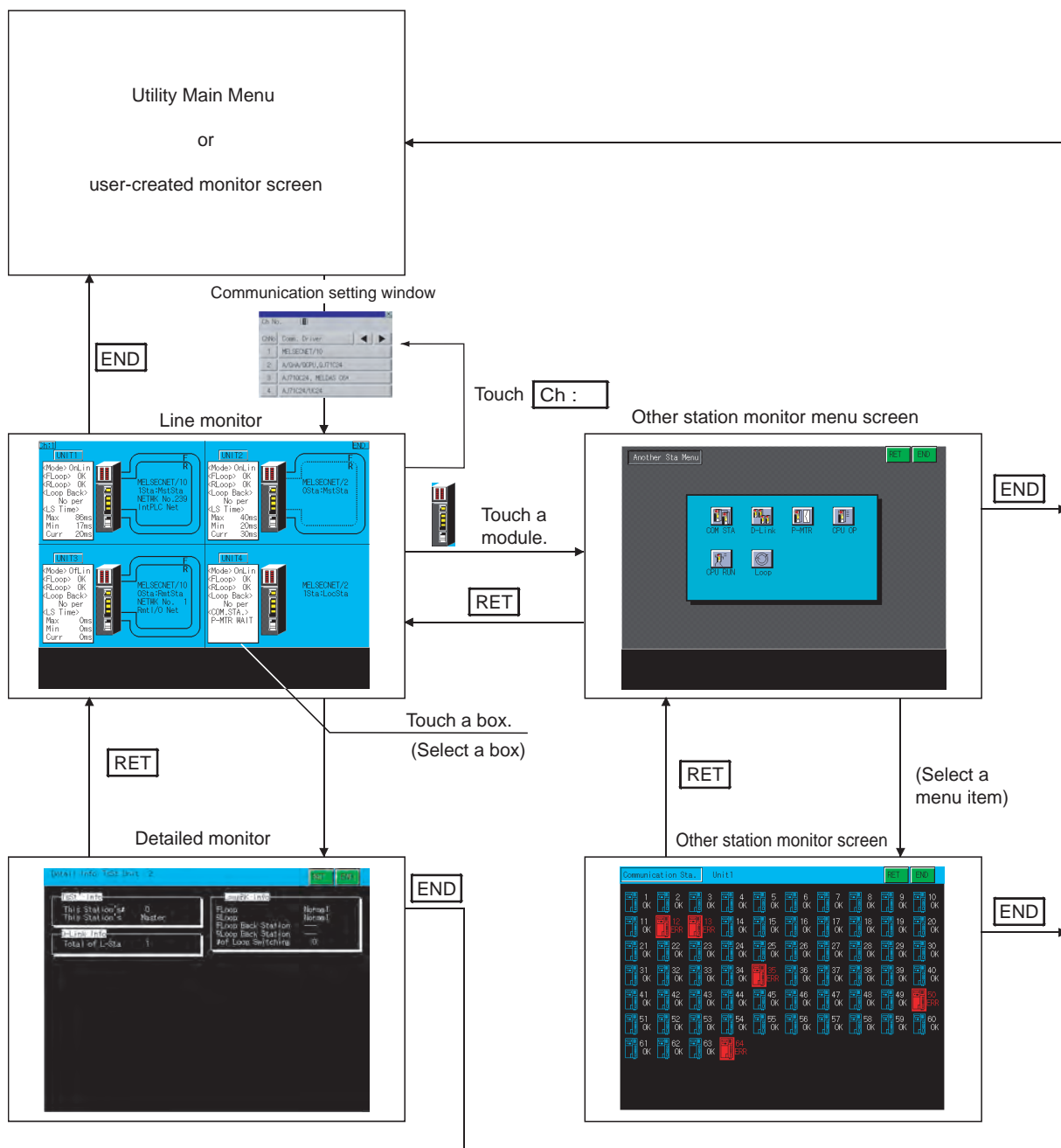
After turning on the GOT, the communication setting window is displayed at the first startup of the network monitor only.

For displaying the communication setting window at the second or later startup, touch the **Ch :** button on the network monitor screen. (→ 7.4 Operation Procedures)

(3) If the project data has not been downloaded

The network monitor can be started from the utility even if the project data has not been downloaded to the GOT.

2 Changing screens



7.4 Operation Procedures

This section describes the information and key functions displayed on the network monitor screen.

The display on the network monitor screen varies slightly depending on the GOT used, and a screen for the GT1575-V is used for the descriptions in this section.

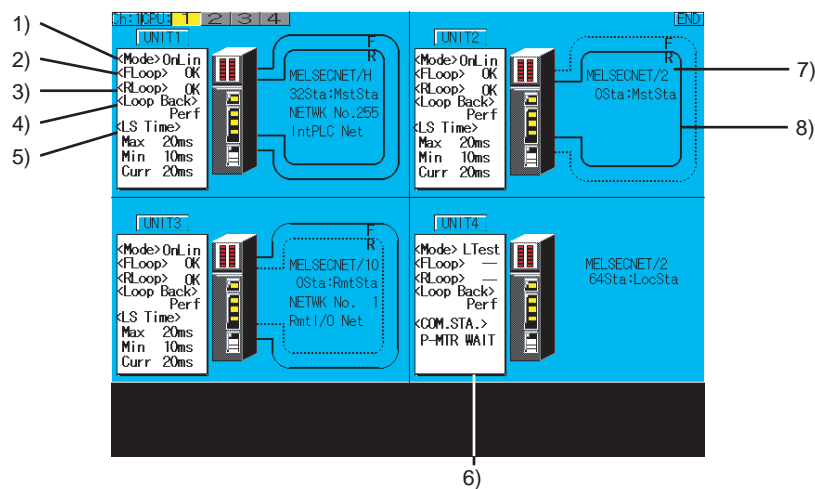
7.4.1 Line monitor

This section describes the structure of the monitor screen and the common operations used when executing the line monitor.

1 Display contents and keys functions

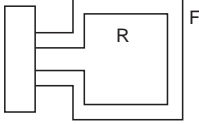
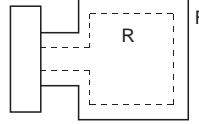
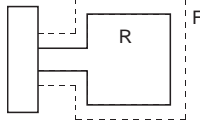
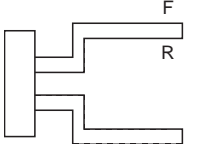
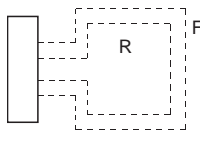
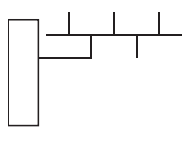
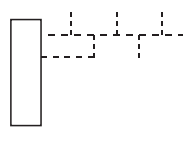
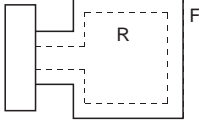
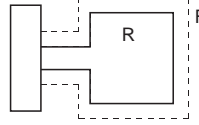
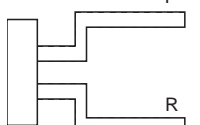
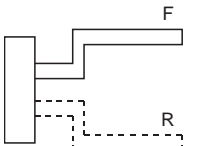
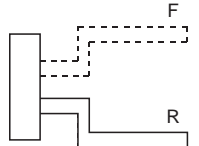
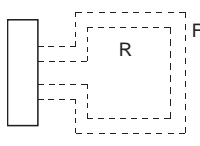
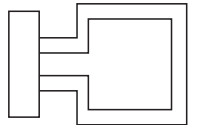
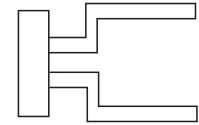
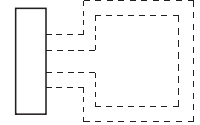
This section describes the line monitor screen configuration and the function of keys displayed on the screen after starting the network monitor.

(1) Displayed contents



No.	Display contents
1)	This shows the operation mode of the host. (On-line, Off-line, Test) ^{*1}
2)	This shows the status of the F-loop (Forward loop). (OK, NG) ^{*2}
3)	This shows the status of the R-loop (Reverse loop). (OK, NG) ^{*2}
4)	This shows whether the loopback was executed or not. (Executed, Not executed)
5)	This shows the link scan time required for the control station and the normal station, for the remote master station and the remote I/O station, and for the master station and all the sub-stations. Maximum (the maximum value of link scan time) Minimum (the minimum value of link scan time) Current (the current value of link scan time)
6)	This shows the communication status of the host. (Only for MELSECNET(II) local station) P-MTR WAIT: Ready to receive parameters from the master station. Cyclic com: Normal communication Com. suspension: Communication is suspended because the host is disconnected.
7)	This shows the network category, network number, and station number.

(Continued to next page)

No.	Display contents
	<p>For the MELSECNET/H and MELSECNET/10 network systems, the loop status is displayed as shown below. (Forward loop: F, Reverse loop: R)</p> <p>(a) Forward loop: OK Reverse loop: OK</p>  <p>(b) Forward loop: OK Reverse loop: NG</p>  <p>(c) Forward loop: NG Reverse loop: OK</p>  <p>(d) Loopback in execution</p>  <p>(e) Forward loop: NG Reverse loop: NG</p>  <p>(f) MELSECNET/10 coaxial bus (OK)</p>  <p>(g) MELSECNET/10 coaxial bus (NG)</p> 
8)	<p>For the MELSECNET(II) network system, the loop status is displayed as shown below. (Forward loop: F, Reverse loop: R)</p> <p>(a) Data link in execution in forward loop</p>  <p>(b) Data link in execution in reverse loop.</p>  <p>(c) Loopback is performed in the forward/reverse loop direction.</p>  <p>(d) Loopback is performed in the forward loop direction only.</p>  <p>(e) Loopback is performed in the reverse loop direction only.</p>  <p>(f) Data link is not available.</p> 
	<p>For the CC-Link IE controller network, the loop status is displayed as shown below.</p> <p>(a) Normal status</p>  <p>(b) Loopback in execution</p>  <p>(c) All stations with errors</p> 

*1 [Test] is only displayed when using MELSECNET(II).

When using a system other than MELSECNET(II), [Off-line] is displayed even during testing of the forward or reverse loop.

*2 The loop names vary depending on the network system to be monitored as shown below.

MELSECNET/H, MELSECNET/10, MELSECNET(II) network systems	CC-Link IE controller network
Forward loop	OUT-side loop
Reverse loop	IN-side loop



When the GOT target is AnACPU or AnNCPU


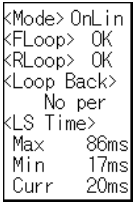
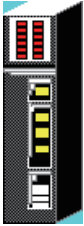


"MELSECNET(II)" is displayed even if a MELSECNET/10 network module is installed.

In addition, if there is a master station and local station, module 1 of the line monitor is displayed as "Master station".

Network module		Display on the GOT	
1st module	2nd module	Module 1	Module 2
Local station	Master station	Master station	Local station

(2) Key functions

This section describes the function of keys to be used for the line monitor operations.

Key	Function
	Exits the line monitor and returns to the screen where the network monitor function was started.
	Switches to the detailed monitor screen that corresponds to the module displayed on the current monitor screen. This key is effective for each screen.
	Switches to the other station monitor menu that corresponds to the network displayed on the current monitor screen. This key is effective for each screen.
	Displays the communication setting window.
	Changes the monitoring destination CPU using the controller number. (For multi-CPU system connection only) The controller number is displayed according to the number of CPUs loaded.

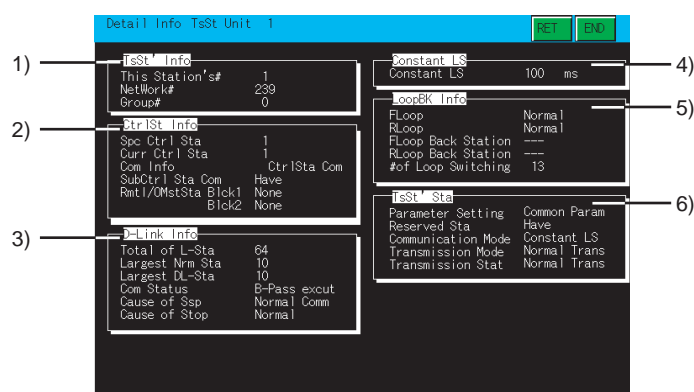
7.4.2 Detailed monitor

This section describes the detailed monitor and the common operations used when executing the line monitor.

1 Display contents and keys functions: acting as a MELSECNET/H or MELSECNET/10 Control station/normal station

This section describes the contents of the detailed monitor and the function of on-screen keys. All these are displayed and used when the host acts as the control station/normal station on the MELSECNET/H, MELSECNET/10.

(1) Displayed contents



No.	Item	Display contents
1)	TsSt' Info	<ul style="list-style-type: none"> This Station's # : Indicates the station number of the host. Network # : Indicates the network number. Group # : Indicates the group number.
2)	Ctrl St Info	<ul style="list-style-type: none"> Spec Ctrl Sta : Indicates the station number of the station that is specified as a control station. Curr Ctrl Sta : Indicates the station number of a station that is currently acting as the control station. Com Info : Indicates whether the host is communicating with the control station or the sub-control station. SubCtrl Sta Com : Indicates whether there is a sub-control station link. Rmt I/OMstSta*1 : Displays the station number of the remote I/O master station for X/Y communication block1 and block 2. Displays "None" when there is no setting.
3)	D-Link Info	<ul style="list-style-type: none"> Total of L-Sta : Indicates the maximum number of the stations to be linked. The maximum number is defined by common parameters. Largest Nrm Sta : Indicates the maximum station number of the station performing a communication in a normal condition. Largest DL-Sta : Indicates the maximum station number of the station that is data-linked. Com Status : Shows the current communications status of the host. (D-Link in prog/D-Link Stop (A)/D-Link Stop (H)/B-Pass excut/Disconnection/Loop test/Set Conf. test/Sta Odr. Conf./Com. test/Offline test/Reset. in prgr.) Causes of Ssp : Indicates the causes why the communications were interrupted. This indicates "Normal" if communications are normal. (Normal/Offline/Offline Test/Line error/Disconnection/Initialize/Others (error codes)) Causes of Stop : Indicates the causes why the data link was stopped. This indicates "Normal" if communications are normal. (Stop designat/No common para/ Host Para error/Host CPU error/Com. suspension/Others)

For details of *1, refer to the following page.

(Continued to next page)



No.	Item	Display contents
4)	Constant LS	Indicates the predetermined time of constant link scans.
5)	LoopBK Info ^{*2}	<ul style="list-style-type: none"> ▪ FLoop : Shows the status of the forward loop lines of the host. (Normal/LoopBK Trans/D-Link Impo) ▪ RLoop : Shows the status of the reverse loop lines of the host. (Normal/LoopBK Trans/D-Link Impo) ▪ FLoop Back Station : Indicates the station number of a station that executes the loopback along the forward loop. Displays "---" when the loopback is operating normally. ▪ RLoop Back Station : Indicates the station number of a station that executes the loopback along the reverse loop. Displays "---" when the loopback is operating normally. ▪ # of Loop Switching : Indicates the cumulative number of times for which loops have been switched.
6)	TsSt' Sta	<ul style="list-style-type: none"> ▪ Parameter Setting : Common Param, Common + Spec if, Default Param, Default + Specif ▪ Reserved Sta : Indicates the availability of a reserved station. (Have/None) ▪ Communication Mode : Indicates either "Normal mode" or "Constant LS." ▪ Transmission Mode : Indicates either "Normal Trans" or "Multiple Trans."^{*2} ▪ Transmission Stat : Indicates either "Normal Trans" or "Multiple Trans."^{*2}

*1 This is not displayed when the CPU type of the GOT connection target is AnNCPU or AnACPU

*2 "---" is displayed when coaxial bus connections are established.

(2) Key functions

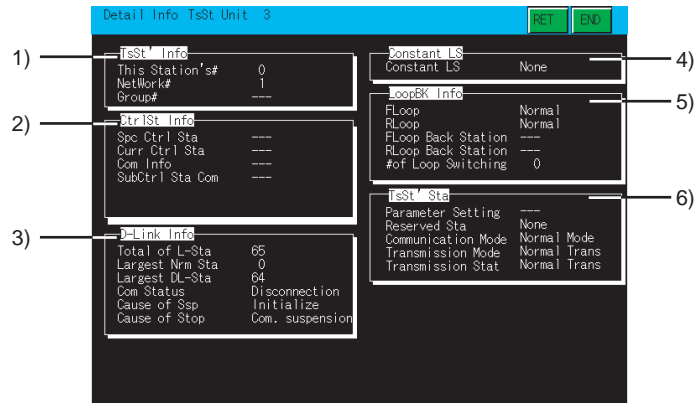
The table below shows the function of keys that are used on the detailed monitor.

Key	Function
	Returns to the line monitor.
	Exits the detailed monitor and returns to the screen where the network monitor function was executed.

2 Display contents and keys functions: acting as a MELSECNET/H, MELSECNET/10 remote master station

This section describes the screen configuration of the detailed monitor and the function of on-screen keys when the host acts as the remote master station on the MELSECNET/H, MELSECNET/10.

(1) Displayed contents



No.	Item	Display contents
1)	TsSti Info	<ul style="list-style-type: none"> This Stations # : Indicates the station number of the host. Network # : Indicates the network number. Group # : Not displayed. ("---" is displayed.)
2)	Ctrl St Info	<ul style="list-style-type: none"> Spc Ctrl Sta : Not displayed. ("---" is displayed.) Curr Ctrl Sta : Not displayed. ("---" is displayed.) Com Info : Not displayed. ("---" is displayed.) SubCtrl-Sta Com : Not displayed. ("---" is displayed.)
3)	D-Link Info	<ul style="list-style-type: none"> Total of L-Sta : Indicates the maximum number of the stations to be linked, which is set by common parameters. Largest Nrm Sta : Indicates the maximum station number of the station that is connected in a normal condition. Largest DL-Sta : Indicates the maximum station number of the station that is performing data link. Com Status : Shows the current communications status of the host. (D-Link in prog/D-Link Stop (A)/D-Link Stop (H)/B-Pass excut/Disconnection/ Loop test/Set Conf. test/Sta Odr. Conf./Com. test/Offline test/Reset. in prgr.) Causes of Ssp : Indicates the causes why the communications were interrupted. This indicates "Normal" if communications are normal. (Normal/Offline/ Offline Test/Line error/Disconnection/Initialize/Others (error codes)) Causes of Stop : Indicates the causes why the data link was stopped. This indicates "Normal" if communications are normal. (Stop disignat/No common para/Host Para error/Host CPU error/Com. suspension/Others (error codes))
4)	Constant LS	Indicates the predetermined time of constant link scans.



(Continued to next page)

No.	Item	Display contents
5)	LoopBK Info* ¹	<ul style="list-style-type: none"> ▪ FLoop : Shows the status of the forward loop lines of the host. (Normal/LoopBK Trans/D-Link Impo) ▪ RLoop : Shows the status of the reverse loop lines of the host. (Normal/LoopBK Trans/D-Link Impo) ▪ FLoop Back Station : Indicates the station number of a station that executes the loopback along the forward loop. Displays "---" when the loopback is operating normally. ▪ RLoop Back Station : Indicates the station number of a station that executes the loopback along the reverse loop. Displays "---" when the loopback is operating normally. ▪ # of Loop Switching : Indicates the cumulative number of times for which loops have been switched.
6)	TsSt' Sta	<ul style="list-style-type: none"> ▪ Parameter Setting : Not displayed. ("---" is displayed.) ▪ Reserved Sta : Indicates the availability of a reserved station. (Have/None) ▪ Communication Mode : Indicates either "Normal mode" or "Constant LS." ▪ Transmission Mode : Indicates either "Normal Trans" or "Multiple Trans."*¹ ▪ Transmission Stat : Indicates either "Normal Trans" or "Multiple Trans."*¹

*¹ "---" is displayed when coaxial bus connections are established.

(2) Key functions

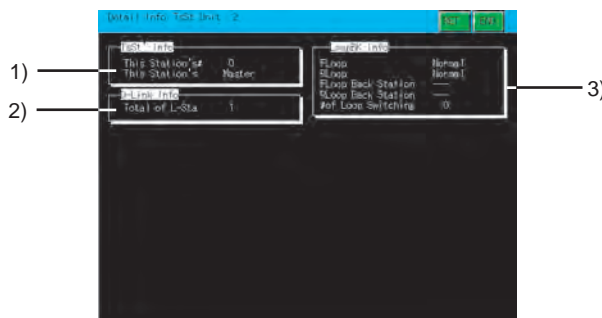
The table below shows the function of keys that are used on the detailed monitor.

Key	Function
	Returns to the line monitor.
	Exits the detailed monitor and returns to the screen where the network monitor function was started.

3 Display contents and keys functions: acting as a MELSECNET(II) master station

This section describes the screen configuration of the detailed monitor and the function of on-screen keys when the host acts as the master station on the MELSECNET(II).

(1) Displayed contents



No.	Item	Display contents
1)	TsStf Info	This Station's # : This shows the station number of the host. This Station's : Indicates the category of the host.
2)	D-Link Info	Indicates the maximum number of the stations to be linked, which is defined by common parameters.
3)	LoopBK Info	<ul style="list-style-type: none"> FLoop : Shows the status of the forward loop lines of the host. (Normal/NG) RLoop : Shows the status of the reverse loop lines of the host. (Normal/NG) FLoop Back Station : Indicates the station number of a station that executes the loopback along the forward loop. When loopback is normal, "---" is displayed. When there is no loopback station, "F" is displayed. RLoop Back Station : Indicates the station number of a station that executes the loopback along the reverse loop. When loopback is normal, "---" is displayed. When there is no loopback station, "R" is displayed. # of Loop Switching : Indicates the cumulative number of times for which loops have been switched.

(2) Key functions

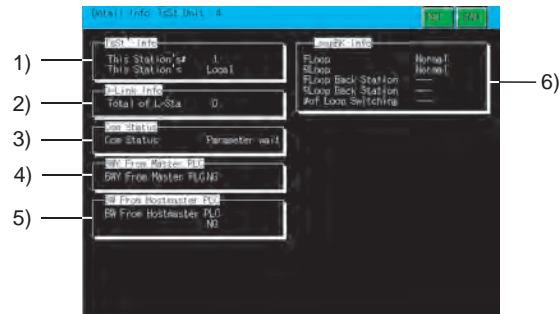
The table below shows the function of keys that are used on the detailed monitor.

Key	Function
RET	Returns to the line monitor.
END	Exits the detailed monitor and returns to the screen where the network monitor function was started.

4 Display contents and keys functions: acting as a MELSECNET(II) local station

This section describes the screen configuration of the detailed monitor and the function of on-screen keys when the host acts as the local station on the MELSECNET(II).

(1) Displayed contents



No.	Item	Display contents
1)	TsStf Info	<ul style="list-style-type: none"> This Station's # : Indicates the station number of the host. This Station's : Indicates the category of the host.
2)	D-Link Info	<ul style="list-style-type: none"> Total of L-Sta : Indicates the maximum number of the stations to be linked, which is defined by common parameters.
3)	Com status	This shows the communication status of the host. (Parameter wait/Cyclic comm/Com. suspension)
4)	BWY From Master	This shows the status of receiving Device BWY from the master station. OK: Data is being received by cyclic communication. NG: Unable to receive because the host is disconnected, etc.
5)	BW From Hostmaster	This shows the status of receiving Device BW from the master station of a dual-layer system. OK: Data is being received by cyclic communication. NG: Unable to receive because the host is disconnected, etc.
6)	LoopBK Info	<ul style="list-style-type: none"> FLoop : Shows the status of the forward loop lines of the host. (Normal/NG) RLoop : Shows the status of the reverse loop lines of the host. (Normal/NG) FLoop Back Station : Not displayed. ("---" is displayed.) RLoop Back Station : Not displayed. ("---" is displayed.) # of Loop Switching : Not displayed. ("---" is displayed.)

(2) Key functions

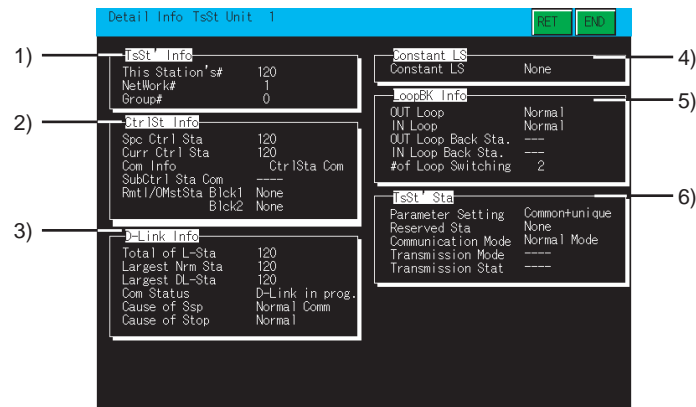
The table below shows the function of keys that are used on the detailed monitor.

Key	Function
RET	Returns to the line monitor.
END	Exits the detailed monitor and returns to the screen where the network monitor function was started.

5 Display contents and keys functions when monitoring CC-Link IE controller network

This section describes the screen configuration of the detailed monitor and the functions of on-screen keys when the GOT monitors a control station or normal station on the CC-Link IE controller network set as the host station.

(1) Displayed contents



No.	Item	Display contents
1)	TsSt' Info	<ul style="list-style-type: none"> This Station's# : Displays the host station number. NetWork# : Displays the network number. Group# : Displays the group number.
2)	CtrlSt Info	<ul style="list-style-type: none"> Spc Ctrl Sta : Displays the station number set as the control station. Curr Ctrl Sta : Displays the station number of the station currently operating as the control station. Com Info : Displays whether the GOT communicates with the control station or sub-control station. SubCtrl Sta Com : Not displayed ([---] is displayed.) RmtI/OMstSta : Displays the station numbers of the I/O master stations for block 1 and block 2. [None] is displayed with no setting.
3)	D-Link Info	<ul style="list-style-type: none"> Total of L-Sta : Displays the total number of stations on the monitored network set for common parameters. Largest Nrm Sta : Displays the maximum station number of the station communicating normally. Largest DL-Sta : Displays the maximum station number of the station performing a data link. Com Status : Displays the current communication status of the host station. (D-Link in prog., D-Link stopped, B-Pass excut, B-Pass stopped, Offline test, Offline) Cause of Ssp^{*1} : Displays the reason for the interrupted communication. [Normal Comm] is displayed with normal communications. (Cable disconnect, Wrong cable, Checking cables, Disconnect/retrn, Offline mode, Offline test, Self-check mode) Cause of Stop^{*2} : Displays the reason for the interrupted data link. [Normal] is displayed with normal data links. (Stop disignat, D-Link time up, Testing line, Param not rcvcd, Invlid Host No., Set Rsvd Sta., Dup Host No., Dup CtrlSta No., Sta No. not set, Invlid NTWK No., Host Para error, Params in comm., CPU stop error, CPU pwr stp err)

(Continued to next page)



No.	Item	Display contents
4)	Constant LS	Displays the set contact link scan time.
5)	LoopBK Info	<ul style="list-style-type: none"> ▪ OUT Loop : Displays the OUT-side loop line status of the host station. (Normal, LoopBK Trans, All Sta. NG) ▪ IN Loop : Displays the IN-side loop line status of the host station. (Normal, LoopBK Trans, All Sta. NG) ▪ OUT Loop Back Sta. Displays the station number of the OUT-side loopback station. [---] is displayed with normal loopbacks. ▪ IN Loop Back Sta. : Displays the station number of the IN-side loopback station. [---] is displayed with normal loopbacks. ▪ #of Loop Switching : Displays the accumulated number of switching loops.
6)	TsSt' Sta	<ul style="list-style-type: none"> ▪ Parameter Setting : Displays [No parameters], [Common Param], [Unique param], or [Common+unique]. ▪ Reserved Sta : Displays whether a reserved station exists or not. ▪ Communication Mode : Displays [Normal Mode] or [Constant LS]. ▪ Transmission Mode : Not displayed ([---] is displayed.) ▪ Transmission Stat : Not displayed ([---] is displayed.)

*1 When the station is in the hardware test mode, self-loopback test mode, circuit test mode, or station-to-station test mode, [Offline test] is displayed.

*2 For duplication of the control station or station number, [Dup CtrlSta No.] is displayed.

(2) Key functions

The table below shows the function of keys that are used on the detailed monitor.

Key	Function
	Returns to the line monitor.
	Exits the detailed monitor and returns to the screen where the network monitor function was started.

7.4.3 Other station monitor

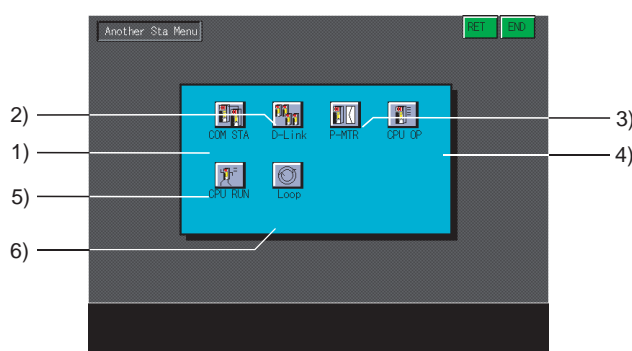
This section describes the structure of the monitor screen and the common operations used when executing the other station monitor.

1 Display contents and keys functions: other station monitor menu

This section describes the other station monitor menu screen and the function of on-screen keys. The menu screen for the other station monitor is displayed by touching a module number displayed on the host monitor screen.

By this other station monitor menu, each of the other station monitor can be specified.

(1) Displayed contents



No.	Item	Display contents
1)	COM STA	Switches to the communication status monitor for other stations. ^{*1} (☞ 7.4.4 Other station communication status monitor)
2)	D-Link	Switches to the data link status monitor for other stations. ^{*2} (☞ 7.4.5 Other station data link status monitor)
3)	P-MTR	Switches to the parameter status monitor for other stations. ^{*1} (☞ 7.4.6 Other station parameter status monitor)
4)	CPU OP	Switches to the CPU operation status monitor for other stations. ^{*3} (☞ 7.4.7 Other station CPU operation status monitor)
5)	CPU RUN	Switches to the CPU RUN status monitor for other stations. ^{*3} (☞ 7.4.8 Other station CPU RUN status monitor)
6)	Loop	Switches to the loop status monitor for other stations. ^{*4} (☞ 7.4.9 Other station loop status monitor)

*1 This cannot be selected when a MELSECNET(II) local station is selected using the line monitor.

*2 This cannot be selected when a MELSECNET(II) master station or local station is selected using the line monitor.




*3 This cannot be selected when a remote I/O station is selected using the line monitor.

*4 The other station loop status monitor is not available in the following conditions.

- When a local station on the MELSECNET(II) network system is selected using the line monitor
- When a MELSECNET network system with coaxial cables is used
- When a station on the CC-Link IE controller network is selected using the line monitor

(2) Key functions

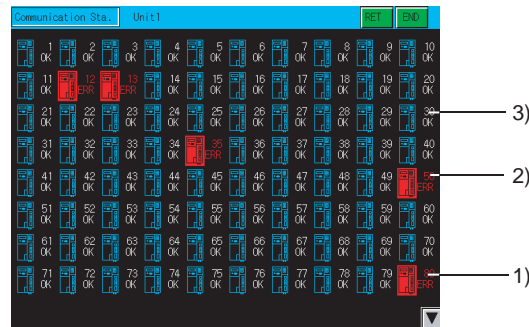
The table below shows the function of keys to be used for the other station monitor operations.

Key	Function
	Switches to each monitor for other stations.
	Returns to the line monitor.
	Exits the other station monitor screen and returns to the screen where the network monitor function was started.

7.4.4 Other station communication status monitor

This section describes the screen configuration of the other station communication status monitor and the function of keys displayed on it.
This screen cannot be displayed for a MELSECNET(II) local station.

(1) Displayed contents



No.	Display contents
1)	Displays the communication status by station number. (OK/ERR) The station numbers displayed do not indicate the number of station numbers in the network, rather the maximum number of communication stations.
2)	Any station in an abnormal condition is highlighted.
3)	Reserved stations are displayed as normal stations.

(2) Key functions

The table below shows the functions of the keys that are used for the other station communications status monitor operations.

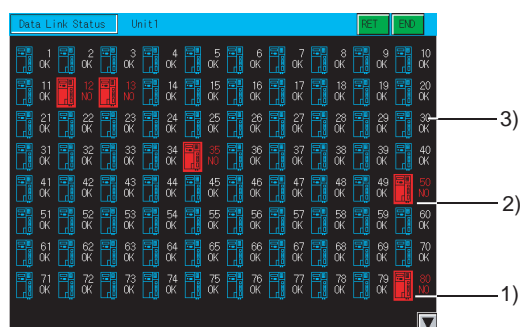
Key	Function
	Returns to the other station monitor.
	Exits the other station communication statuses monitor screen and returns to the screen where the network monitor was started.
	Switches the screen display of stations. (1 to 80 stations/81 to 120 stations)

7.4.5 Other station data link status monitor

This section describes the screen configuration of the other station data link status monitor and the function of on-screen keys.

This screen cannot be displayed for a MELSECNET(II) master station or local station.

(1) Displayed contents



No.	Display contents
1)	Displays the data link status by station number. (OK/NO) The station numbers displayed do not indicate the number of station numbers in the network, rather the maximum number of communication stations.
2)	Any station to which data link is not performed is highlighted.
3)	Reserved stations are displayed as having a data link established.

(2) Key functions

The table below shows the function of keys that are used for the operations of other station data link status monitor.

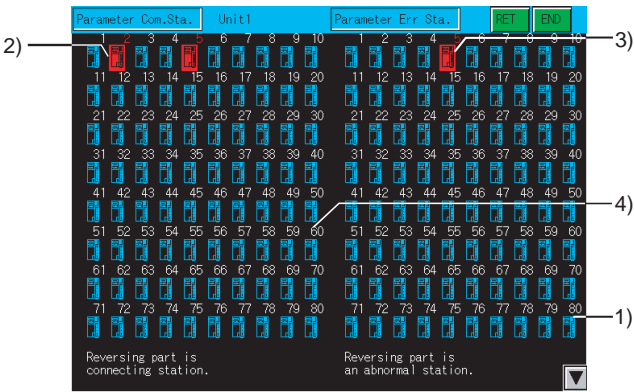
Key	Function
RET	Returns to the other station monitor.
END	Exits the other station data link status monitor screen and returns to the screen where the network monitor was started.
▼ ▲	Switches the screen display of stations. (1 to 80 stations/81 to 120 stations)

7.4.6 Other station parameter status monitor

This section describes the screen configuration of the other station parameter status monitor and the function of on-screen keys.

This screen cannot be displayed for a MELSECNET(II) local station.

(1) Displayed contents



No.	Display contents
1)	Displays the parameter status by station number. The station numbers displayed do not indicate the number of station numbers in the network, rather the maximum number of communication stations.
2)	Any station whose parameters are monitored is highlighted.*1
3)	Any station in an abnormal condition is highlighted.
4)	Reserved stations are displayed as normal stations.

*1 Only [Parameter Err Sta.] is displayed when connecting to a MELSECNET(II) master station.

(2) Key functions

The table below shows the function of keys that are used for the operations of the other station parameter status monitor.

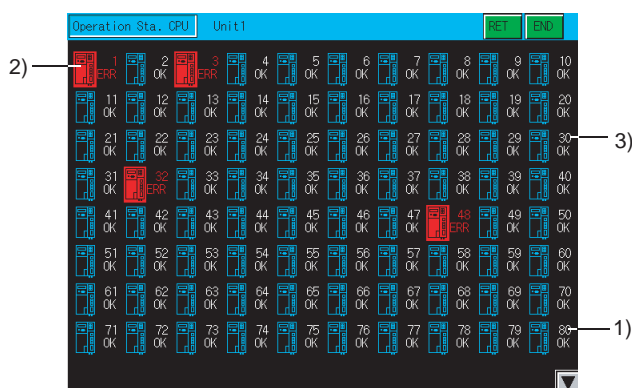
Key	Function
RET	Returns to the other station monitor.
END	Exits the other station parameter status monitor screen and returns to the screen where the network monitor was started.
▼ ▲	Switches the screen display of stations. (1 to 80 stations/81 to 120 stations)

7.4.7 Other station CPU operation status monitor

This section describes the screen configuration of the other station CPU operation status monitor and the function of on-screen keys.

This screen cannot be displayed for a remote I/O network system.

(1) Displayed contents



No.	Display contents
1)	Displays the CPU operation status by station number. (OK/ERR) The station number displayed does not indicate the station number in the network, rather the maximum number of communication stations.
2)	Any station that stays in an abnormal condition or out of operation is highlighted.
3)	Reserved stations and unconnected stations are displayed as normal stations.

(2) Key functions

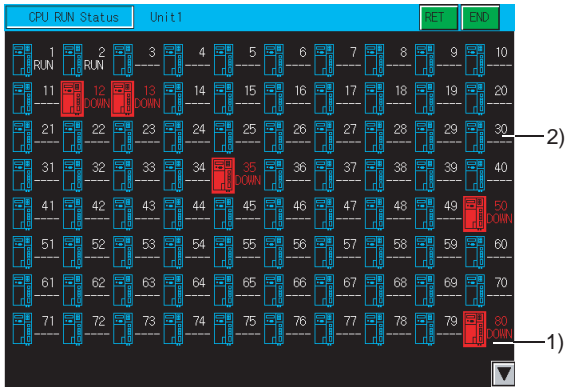
The table below shows the function of keys that are used for the operations of the other station CPU operation status monitor.

Key	Function
	Returns to the other station monitor.
	Exits the other station CPU operation status monitor screen and returns to the screen where the network monitor was started.
	Switches the screen display of stations. (1 to 80 stations/81 to 120 stations)

7.4.8 Other station CPU RUN status monitor

This section describes the other station CPU RUN status monitor and the function of on-screen keys. This screen cannot be displayed for a remote I/O network system.

(1) Displayed contents



No.	Display contents
1)	Displays the CPU operation status by station number. (RUN/STOP) "DOWN" is displayed for stations with communication errors. Up to 64 stations are displayed regardless of the number of stations in a network.
2)	"---" is displayed for a reserved station and the statuses of stations beyond the maximum communication stations, or when a MELSECNET(II) local station has been selected in the line monitor.

(2) Key functions

The table below shows the function of keys that are used for the operations of the other station CPU RUN status monitor.

Key	Function
RET	Returns to the other station monitor.
END	Exits the other station CPU RUN status monitor screen and returns to the screen where the network monitor was started.
▼ ▲	Switches the screen display of stations. (1 to 80 stations/81 to 120 stations)

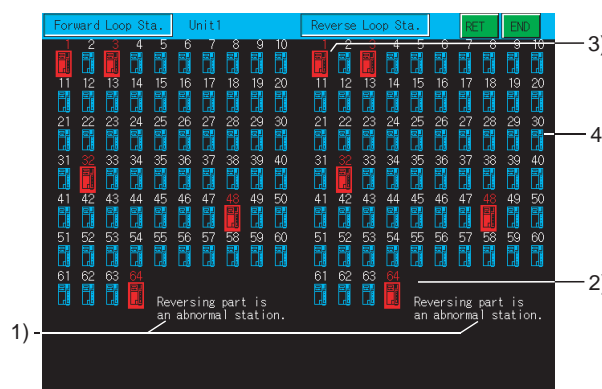
7.4.9 Other station loop status monitor

This section describes the screen configuration of the other station loop status monitor and the function of on-screen keys.

The other station loop status monitor is not available in the following conditions.

- When a local station on the MELSECNET(II) network system is selected using the line monitor
- When a MELSECNET network system with coaxial cables is used
- When a station on the CC-Link IE controller network is selected using the line monitor

(1) Displayed contents



No.	Display contents
1)	The F-loop (forward loop) status and the R-loop (reverse loop) status are displayed.
2)	The station numbers displayed do not indicate the number of station numbers in the network, rather the maximum number of communication stations.
3)	Any station that stays in an abnormal condition is highlighted.
4)	Reserved stations are displayed as normal stations.

(2) Key functions

The table below shows the function of keys that are used for the operations of the other station loop status monitor.

Key	Function
RET	Returns to the other station monitor.
END	Exits the other station loop status monitor screen and returns to the screen where the network monitor was started.

7.5 Error Message and Corrective Action

The following shows the error messages that are displayed during the network monitor operation and how to handle them.

Error message	Contents of error	Action to take
Communication channel setup error	There is no channel for communication.	Set the channel number in the Communication Settings of the utility.
Can not Communication	Communication could not be established with the PLC CPU.	<ul style="list-style-type: none">▪ Check the connections between the controller and the GOT for disconnected connectors and cables.▪ Check if an error has occurred in the controller.
Key Word error	A keyword has been set in the parameter when monitoring the MELSECNET(II) master station of the QnACPU.	Release the set keyword.

8. Q MOTION MONITOR



8.1 Features

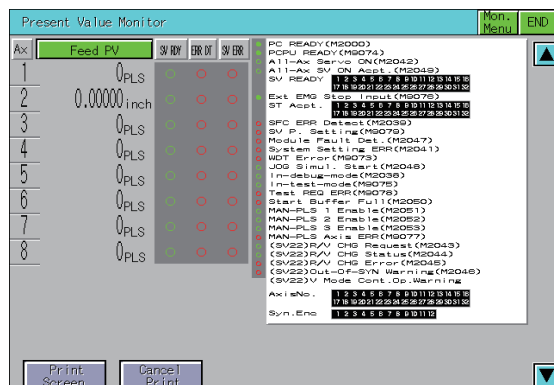
The Q motion monitor enables the servo monitoring and parameter setting of the motion controller CPU. The following are the features of the Q motion monitor.

1 Various servo monitor data can be displayed on multiple monitor screens

The Q motion monitor function has multiple monitor screens, on which you can monitor servo data in a variety of patterns.

(Display examples)

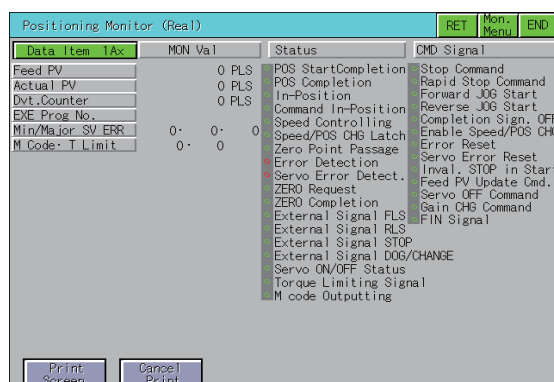
Present Value Monitor



- Monitors and displays the feed current values and actual current values of all running axes.

(8.4.3 Present Value Monitor screen)

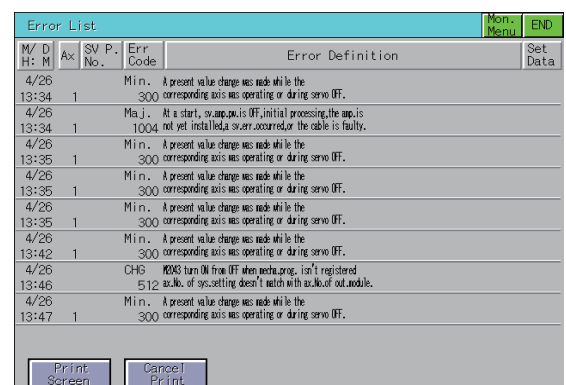
Positioning Monitor



- Monitors the details of the positioning data set to any axis.

(8.4.7 Positioning Monitor screen)

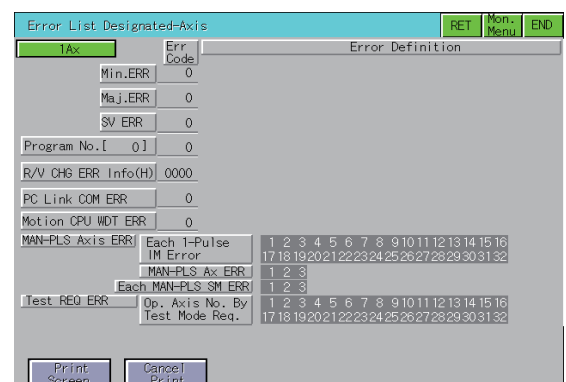
Error List



- Displays the history of errors that occurred on and after the leading edge of PLC ready (M2000).

(8.4.5 Error List screen)

Error List Designated-Axis

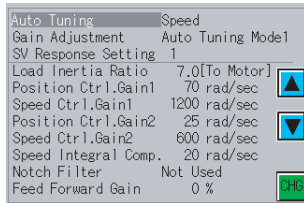


- Displays the latest errors that occurred on the specified axis.

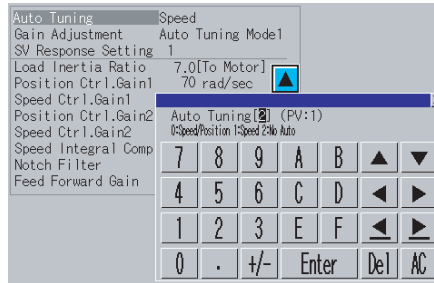
(8.4.6 Error List Designated-Axis screen)

2 Servo parameters can be changed by writing (Write example: Disabling the auto tuning function)

Parameter setting screen

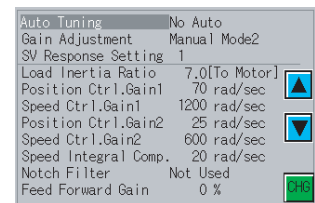


Parameter setting window appears



Change auto tuning from "1"
to "2" (No Auto).

Parameter setting screen



Parameter setting is changed.

- 1 By performing writing from the parameter setting screen, write the servo parameter setting (basic parameters/adjustment parameters) to the motion controller CPU.
- 2 To change a servo parameter setting, enter the necessary numerical value or option number from the automatically displayed key window, and write it to the motion controller CPU.

8.2 Specifications

8.2.1 System configuration

This chapter describes the system configuration of the Q motion monitor.

For connection type settings and precautions regarding the communication unit/cable and connection type, see the following manual.



GOT1000 Series Connection Manual

1 Target motion controller CPU of the Q motion monitor

Motion controller CPU^{*1*2}

Q172CPU, Q173CPU, Q172CPUN, Q173CPUN, Q172HCPU, Q173HCPU,
Q172DCPU, Q173DCPU

*1 Use the following production number motion controller CPU when using the Q172CPU or Q173CPU.

- For bus connection and direct CPU connection
Q172CPU: Production number K***** or later
Q173CPU: Production number J***** or later
- For a connection other than bus connection and direct CPU connection
Q172CPU: Production number N***** or later
Q173CPU: Production number M***** or later

*2 Use a motion controller CPU with the following version of the OS installed when using SV13 or SV22 with the Q172CPU, Q173CPU, Q172CPUN, or Q173CPUN.

SW6RN-SV13Q □: 00H or later (00E or later when using the Q172CPU or Q173CPU with a bus connection or direct CPU connection)

SW6RN-SV22Q □: 00H or later (00E or later when using the Q172CPU or Q173CPU with a bus connection or direct CPU connection)

2 Connection type

(1) When the GOT is connected to a QCPU (Q mode), QnACPU, or motion controller CPU

(○: Available, △: Partly restricted, x: Unavailable)

Function		Connection type between GOT and controller							
Name	Description	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	MELSECNET/H connection, MELSECNET/10 connection	CC-Link IE ^{*1}	CC-Link connection	
								ID ^{*2}	G4 ^{*3}
Servo monitor	Monitors the present value, positioning error and other servo-related items on a variety of monitor screens.	△ ^{*4}			○	○	○	○	×
Parameter settings	Changes the setting of the servo parameter.								

*1 Indicates the CC-Link IE controller network connection.

*2 Indicates CC-Link connection (Intelligent device station).

*3 Indicates CC-Link connection (via G4).

*4 Only the motion controller CPU on the host station can be monitored.
Monitoring or setting of parameters of other station cannot be performed.

3 Required option OS and option function board

The option function OS and option function board shown below are required.

Option OS	OS memory space (user area)			Option function board	
	GT16		GT15	GT16	GT15
	Built-in flash memory (ROM)	User memory (RAM)			
Q motion monitor	390KB	770KB	607KB	Not required	GT15-FNB, GT15-QFNB16M, GT15-QFNB48M, GT15-QFNB32M, GT15-MESB48M

(1) Option OS

Install the option OS in the above table to the GOT.

Refer to the following manual for the procedure for installing the option OS.



GT Designer2 Version □ Basic Operation/Data Transfer Manual (8. TRANSFERRING DATA)

(2) OS memory space

The available memory space shown in the table above is required in the user area to install the option OS to the GOT.

Refer to the following manual for the procedure for checking the available memory space of the user area and information about the data using other user areas.



GT Designer2 Version □ Basic Operation/Data Transfer Manual (8. TRANSFERRING DATA)

(3) Option function board

(a) For GT16

No option function board is required.

(b) For GT15

Mount one of the option function boards in the above table on the GOT.

For the GOTs with a built-in option function board, refer to the following.



1.1.2 Hardware and OS' required for each function

For how to mount an option function board on the GOT, refer to the following manual.



GT15 User's Manual (8.10 Option Function Board)

4 Required special data

The following special data is required.

Special data	GOT	Memory space (KB)
Motion monitor data	GT1695M-X, GT1685M-S, GT1595-X, GT1585V-S, GT1585-S, GT1575V-S, GT1575-S	347
	GT1575-V, GT1575-VN, GT1572-VN, GT1565-V, GT1562-VN, GT1555-V	346
	GT1555-Q, GT1550-Q	168

(1) Special data

Download the special data indicated in the table above to the GOT.

Refer to the following manual for the procedure for downloading the data.



GT Designer2 Version □ Basic Operation/Data Transfer Manual
(8. TRANSFERRING DATA)

(2) Memory space for special data

The available memory space shown in the table above is required in the user area to download the special data to the GOT.

Refer to the following manual for the procedure for checking the available memory space of the user area and information about the data using other user areas.



GT Designer2 Version □ Basic Operation/Data Transfer Manual
(8. TRANSFERRING DATA)

8.2.2 Access range

In bus connection, direct CPU connection, or computer link connection, only the motion controller CPU on host station can be monitored. (Monitoring of other stations cannot be performed.)

For the MELSECNET/H, MELSECNET/10, and CC-Link IE controller network connections, the GOT can monitor the motion controller CPU on the control station only.

In CC-Link connection (Intelligent device station), only the motion controller CPU in master station can be monitored.

In Ethernet connection, only the motion controller CPU in host station can be monitored.

The access range other than that mentioned above is the same as the access range when the GOT is connected to a controller.

Refer to the following manual for details of the access range.



GT Designer2 Version □ Screen Design Manual (2.7 Controllers that can be Monitored and Access Range)

8.2.3 Precautions

(1) Main OS software package for motion controller

The only Main OS software package that can be used is SV13 or SV22.

(2) When using GT1555-Q and GT1550-Q

The present value history monitor is not supported.

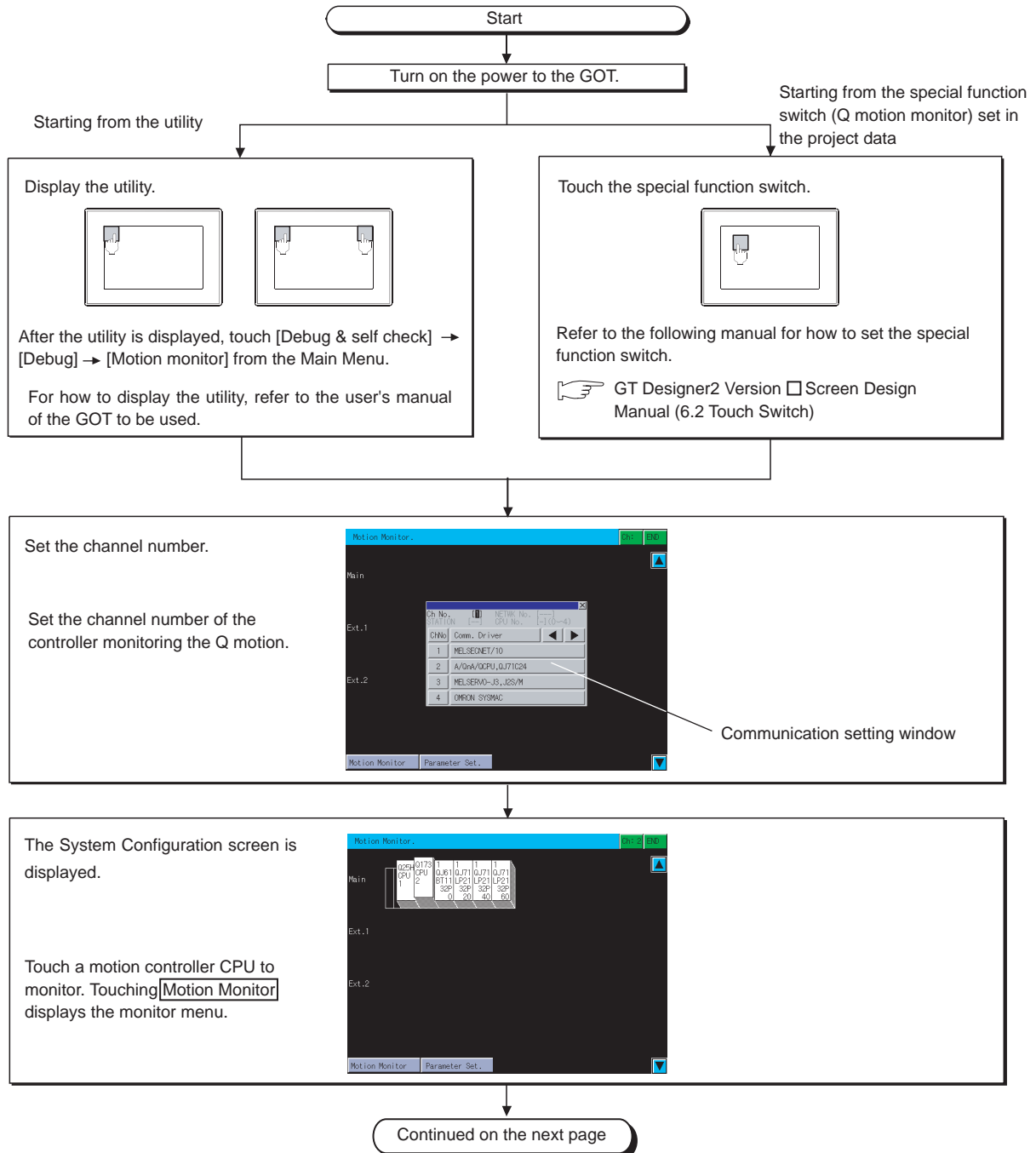
(3) When setting parameters for Q172HCPU or Q173HCPU

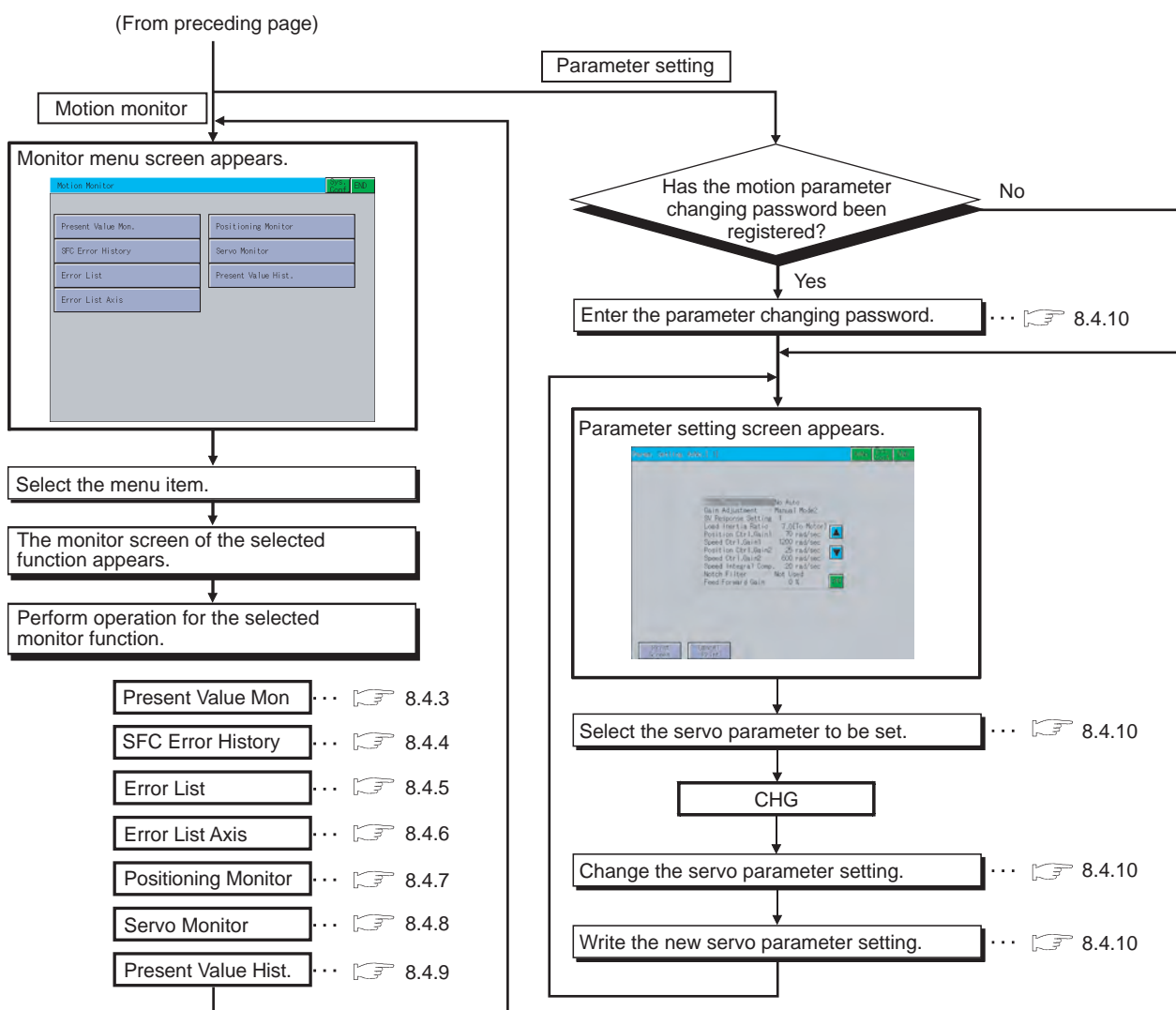
When setting parameters for Q172HCPU or Q173HCPU, after parameter entry, set the switch on the CPU to STOP and RUN again, or reset the CPU.

8.3 Display

1 Operations for display

This section describes the flow until the Q motion monitor operation screen is displayed after the Q motion monitor (Option OS) is installed in the GOT.





(1) How to display the utility

For how to display the utility, refer to the following.



GT16 User's manual (8.3 Utility Display)
GT15 User's manual (9.3 Utility Display)

(2) Displaying communication setting window

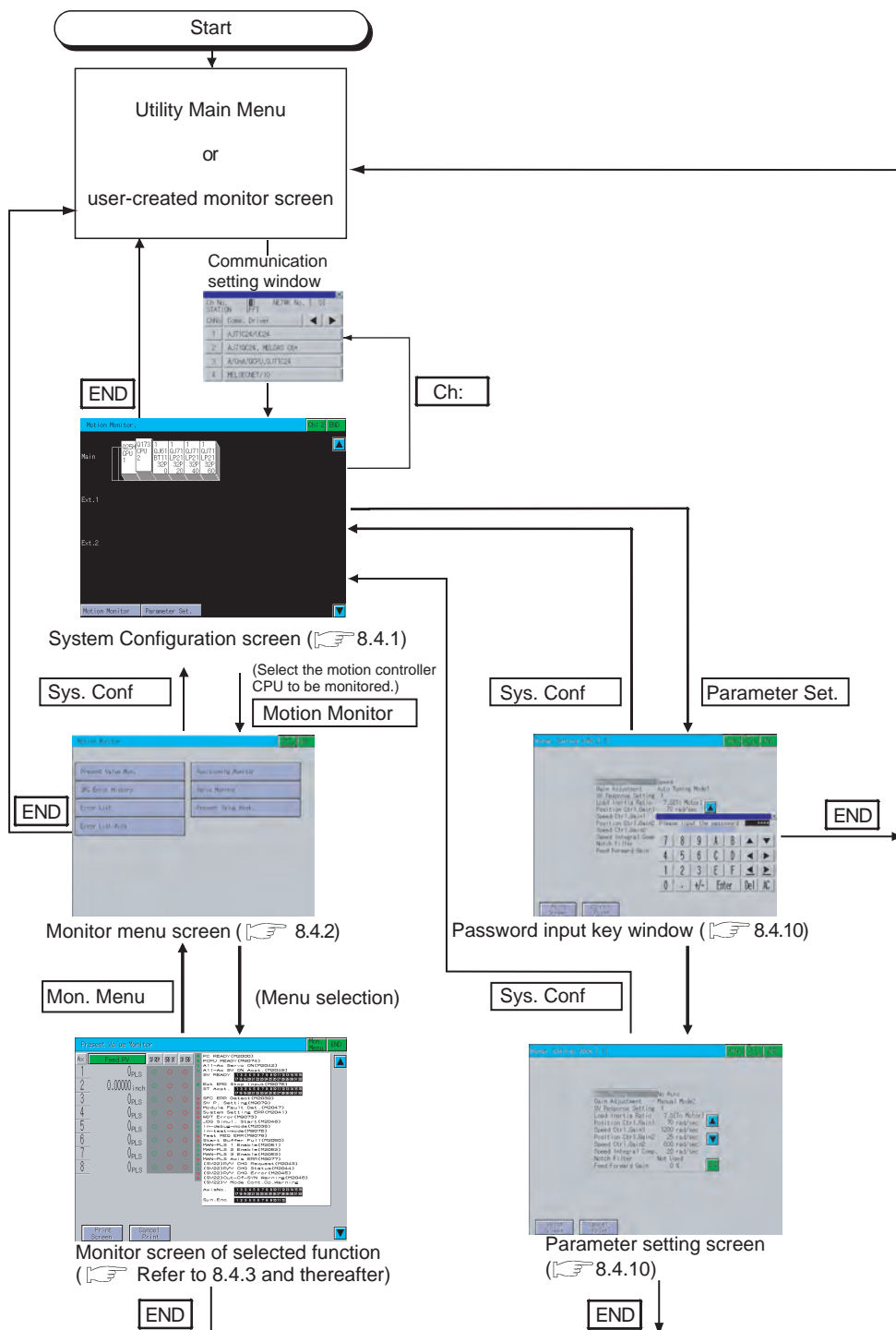
After turning on the GOT, the communication setting window is displayed at the first startup of the Q motion monitor only.

For displaying the communication setting window at the second or later startup, touch the **Ch:** button on the Q motion monitor screen. (8.4 Operation Procedures)

(3) If the project data has not been downloaded

The Q motion monitor can be started from the utility even if the project data has not been downloaded to the GOT.

2 Changing screens



Remark

Screen displayed at next startup

At next startup, the last exited screen is displayed.

However, the last exited screen will not be displayed when the GOT is restarted due to an installation of the OS, turning the GOT power from off to on, or a reset.

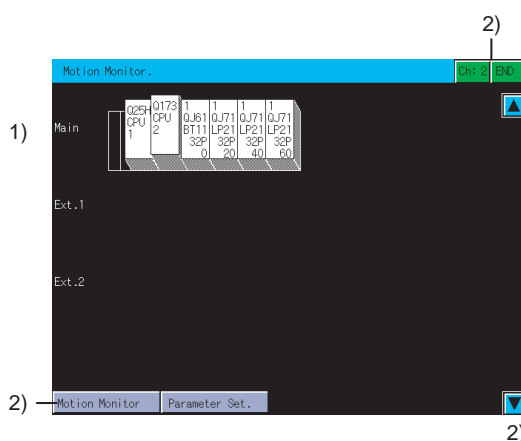
8.4 Operation Procedures

This section explains screen operations to be performed when using the Q motion monitor.
The display screen of the Q motion monitor varies slightly with the GOT used.
This section mainly uses the screen of the GT1575-V for explanation.

8.4.1 System configuration screen layout

This section describes the configuration of the System Configuration screen that is displayed after startup of the Q motion monitor and the functions of the keys displayed on the screen.

1 Displayed contents



No.	Description
1)	The CPU numbers are displayed for CPUs and the control CPU number for the installed module. To choose the motion controller CPU for servo monitor/servo parameter setting, touch the respective display position.
2)	Displays the keys used with the operation on the System Configuration screen shown in 2 . (Touch input)

2 Key functions

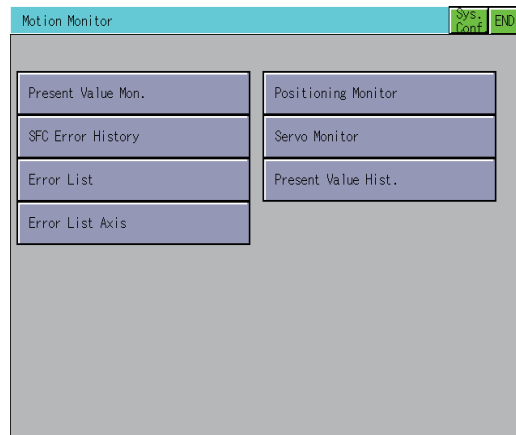
The table below shows the functions of the keys that are used for the operation on the System Configuration screen.

Key	Function
	Displays the communication setting window.
	Exits the monitor and returns to the screen where the Q motion monitor was started.
	Selects the motion controller CPU where servo monitor/servo parameter setting is performed.
	Changes the System Configuration screen to the monitor menu screen. (8.4.2 Monitor Menu screen)
	Changes the System Configuration screen to parameter setting screen. (8.4.10 Parameter setting screen)
	Scrolls the display one stage up or down to display the system configuration of the currently undisplayed stage immediately before/after the currently displayed stage. : Scrolls down one stage. : Scrolls up one stage.

8.4.2 Monitor Menu screen

The Q motion monitor allows you to monitor various servo monitor data on multiple monitor screens. To display any of the monitor screens, make a selection on the monitor menu screen.

(Monitor menu screen)

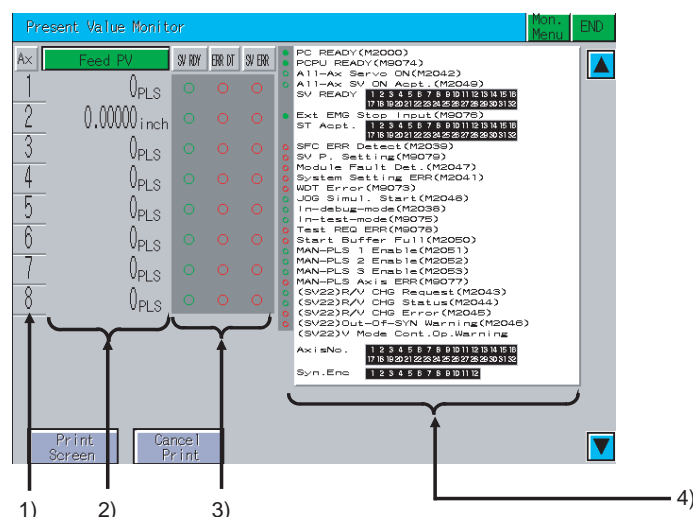


Item	Description
Present Value Mon.	Monitors and displays the feed current values and actual current values of all running axes. (☞ 8.4.3 Present Value Monitor screen)
SFC Error History	Displays the history of errors that occurred in SFC programs from when the motion CPU was powered on or reset. (☞ 8.4.4 SFC Error History screen)
Error List	Displays the history of errors that occurred on and after the leading edge of PLC ready (M2000). (☞ 8.4.5 Error List screen)
Error List Axis	Displays the latest errors that occurred on the specified axis. (☞ 8.4.6 Error List Designated-Axis screen)
Positioning Monitor	Monitors the details of the positioning data set to any axis. (☞ 8.4.7 Positioning Monitor screen)
Servo Monitor	Monitors the servo monitor/servo amplifier. (☞ 8.4.8 Servo Monitor screen)
Present Value Hist.	Displays the history of encoder present values, servo command values and monitor present values of the ABS axis at servo amplifier power-on/off or at home position return. (☞ 8.4.9 Present Value History Monitor screen) Not displayed when using the GT155 □.

8.4.3 Present Value Monitor screen

This section describes the display data of the Present Value Monitor screen and the key functions displayed on the screen.

1 Displayed contents



No.	Item	Function
1)	Ax	The axis numbers of the running axes being monitored are displayed.
2)	Feed PV/Actual PV	The feed present values or actual present values of the running axes are displayed. Touching the display part of the monitored value switches to the positioning monitor screen of the touched axis number. (8.4.7 Positioning Monitor screen)
3)	SV RDY, ERR DT, SV ERR	Whether the servo ready signals, major/minor errors and servo error detection signals are ON (lit) or OFF (not lit) are displayed. Touching the error indication part "●" switches to the Error List Designated-Axis screen of the touched axis number. (8.4.6 Error List Designated-Axis screen)
4)	Bit device screen	The common bit devices are always monitored and displayed. <ul style="list-style-type: none"> Error detection type bit devices Displayed in red General status type bit devices Displayed in green

2 Key functions

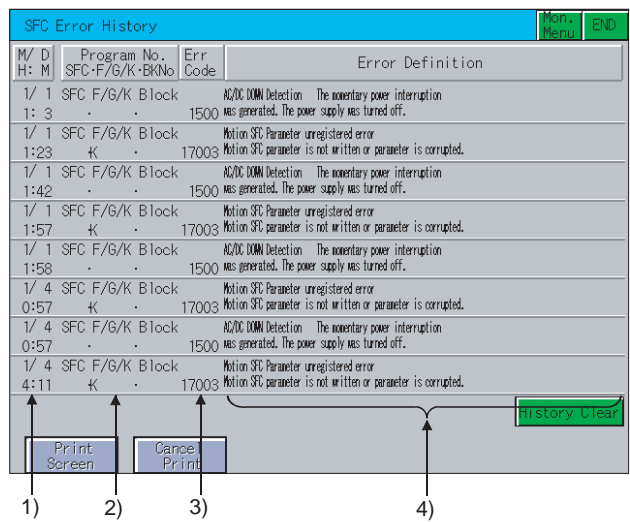
The table below shows the functions of the keys used for operation of the Present Value Monitor screen.

Key	Function
Feed PV / Actual PV	Touching the key alternates the monitor item between the "feed present value" and "actual present value". (Only in the real mode)
Mon. Menu	Returns to the monitor menu screen.
END	Exits the present value monitor and returns to the screen where the Q motion monitor was started.
▲ ▼	Switches the displayed axis number. (Displayed only for Q173CPU, Q173HCPU and Q173CPUN monitoring.)
Print Screen	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following: 8.4.11 Hard copy output
Cancel Print	The operation of this key is invalid.

8.4.4 SFC Error History screen

This section describes the display data of the SFC Error History screen and the key functions displayed on the screen.

1 Displayed contents



No.	Item	Description
1)	M/D H:M	Displays the dates and time when SFC errors occurred. The eight latest errors are displayed for the history of errors.
2)	Program No.	Displays the SFC program numbers where SFC errors occurred.
3)	Err Code	Displays the error codes of the errors that occurred.
4)	Error Definition	Displays the definitions of the SFC errors that occurred.

2 Key functions

The table below shows the functions of the keys used for operation of the SFC Error History screen.

Key	Function
	Returns to the monitor menu screen.
	Exits the SFC Error History screen and returns to the screen where the Q motion monitor was started.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following: (☞ 8.4.11 Hard copy output)
	The operation of this key is invalid.
	Clears the error history. (Only with Q172DCPU and Q173DCPU)

8.4.5 Error List screen

This section describes the display data of the Error List screen and the key functions displayed on the screen.






1 Displayed contents

Error List					Mon Menu	END
M/ D H: M	Ax	SV P. No.	Err Code	Error Definition	Set Data	
4/26 13:34	1		Min. 300	A present value change was made while the corresponding axis was operating or during servo OFF.		
4/26 13:34	1		Ma.j. 1004	At a start, sv.auxp.no.is OFF,initial processing,the auxp.is not yet installed,a sv.err.occurred,or the cable is faulty.		
4/26 13:35	1		Min. 300	A present value change was made while the corresponding axis was operating or during servo OFF.		
4/26 13:35	1		Min. 300	A present value change was made while the corresponding axis was operating or during servo OFF.		
4/26 13:35	1		Min. 300	A present value change was made while the corresponding axis was operating or during servo OFF.		
4/26 13:42	1		Min. 300	A present value change was made while the corresponding axis was operating or during servo OFF.		
4/26 13:46			CHG 512	M043 turn ON from OFF when peda.prog. isn't registered ax.No. of sys.setting doesn't match with ax.No.of out.module.		
4/26 13:47	1		Min. 300	A present value change was made while the corresponding axis was operating or during servo OFF.		
					5)	
1) 2) 3) 4)					Print Screen	
					Cancel Print	
					6)	

No.	Item	Description
1)	M/D H:M	The dates and time when errors occurred are displayed. The eight latest errors are displayed.
2)	Ax	The axis numbers and axis types of the axes where errors occurred are displayed. Virtual axis : Virtual Synchronous encoder axis: Sync
3)	SV P. No.	The servo program numbers that were being executed when the error occurred are displayed. The execution destination of the servo program in error is not displayed.Using the servo program number, refer to the execution destination.
4)	Err Code	Displays the types and error codes of the errors that occurred. The error types are displayed as indicated below. <ul style="list-style-type: none"> Minor error..... Minor Major error..... Major Servo error..... Servo Servo program setting error..... Servo P Real/virtual switching..... Switch Test mode request error Test Manual pulse generator setting error..... Manual PCPU ERROR..... P-WDT SSCNET ERROR..... Communication error
5)	Error Definition	The definitions of the errors that occurred are displayed.
6)	Set Data	The program number in error is displayed if the set data has any errors.

2 Key functions

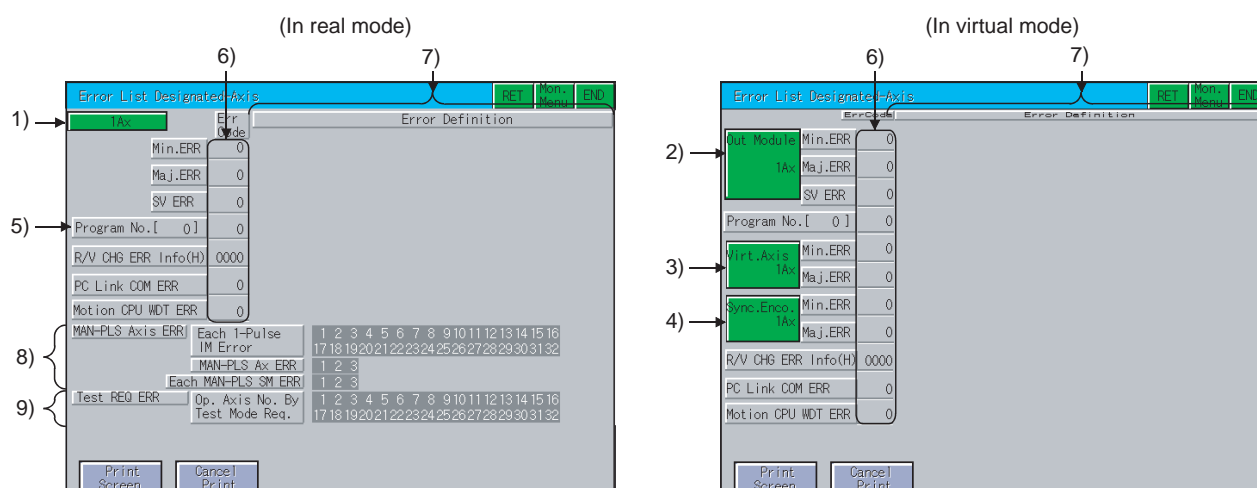
The table below shows the functions of the keys that are used for the operation on the Error List screen.

Key	Function
	Returns to the monitor menu screen.
	Exits the Error List screen and returns to the screen where the Q motion monitor was started.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following:  8.4.11 Hard copy output
	The touch operation of this key is invalid.

8.4.6 Error List Designated-Axis screen

This section describes the display data of the Error List Designated-Axis screen and the key functions displayed on the screen.











1 Displayed contents



No.	Item		Description
1)	Axis No.		Displays the axis number currently being monitored.
2)	Out Module		Displays the output module axis number currently being monitored.
3)	Virt. Axis		Displays the virtual axis number currently being monitored.
4)	Sync. Enco.		Displays the synchronous encoder axis number currently being monitored.
5)	Program No.		Displays the servo program numbers that were being executed when the error occurred.
6)	Err Code		Displays the error codes of the minor/major/servo error, servo program setting error, real/virtual switching error information (error code: hexadecimal), personal computer link communication error code and motion CPU WDT error that are currently occurring.
7)	Error Definition		Displays the definitions of the errors that occurred.
8)	MAN-PLS Axis ERR	Each 1-Pulse 1M Error	Displays the axes where a 1-pulse input magnification setting error occurred.
		MAN-PLS Ax ERR	Displays the errors of the axis numbers set to the manual pulse generators P1 to P3.
		Each MAN-PLS SM ERR	Displays the errors of the smoothing magnifications set to the manual pulse generators P1 to P3.
9)	Test REQ ERR		Displays the axis numbers that are being started at a test mode request.

2 Key functions

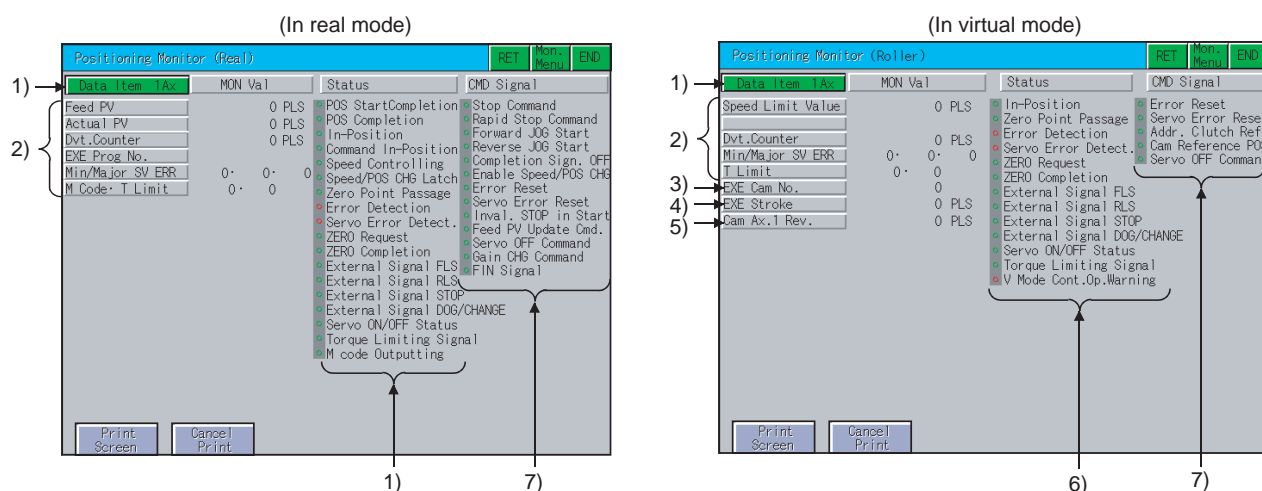
The table below shows the functions of the keys that are used for the operation of the Error List Designated-Axis screen.

Key	Function
 (Only in the real mode)  /  /  (Only in the virtual mode) (Display example: When axis 1 is monitored)	Switches the axes to be monitored.
	Returns to the previous screen.
	Returns to the monitor menu screen.
	Exits the Error List Designated-Axis monitor screen and returns to the screen where the Q motion monitor was started.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following:  8.4.11 Hard copy output
	The touch operation of this key is invalid.

8.4.7 Positioning Monitor screen

This section describes the display data of the Positioning Monitor screen and the key functions displayed on the screen.








1 Displayed contents



No.	Item	Description
1)	Data Item	Displays the axis numbers of the running axes being monitored. For the virtual axis, the axis type is displayed. <ul style="list-style-type: none"> Roller Ballscrew Rotary table Cam
2)	Feed PV	Displays the data during positioning control of the PCPU. <ul style="list-style-type: none"> Feed PV : Target address output to the servo amplifier (value of the roller surface speed for the roller axis) Actual PV : Actually traveled present value (no value is displayed for the roller axis) Dvt. Counter : Difference between feed present value and actual present value EXE Prog No. : Servo program number in execution Min/Major SV ERR : Error code of the latest minor/major/servo error M Code · T Limit : The M code and torque limit of the servo program in execution
3)	EXE Cam No.	Displays the cam number currently controlled.
4)	EXE Stroke	Displays the stroke amount currently controlled.
5)	Cam Ax. 1 Rev.	Displays the present value within one cam axis revolution pulse.
6)	Status	Displays ON and OFF of the symbols that represent the axis-by-axis control statuses. <ul style="list-style-type: none"> In the ON status, the symbol is lit green. At error or servo error detection, the symbol is lit red.
7)	CMD Signal	Displays ON and OFF of the positioning command signals. In the ON status, the signal is lit green.

2 Key functions

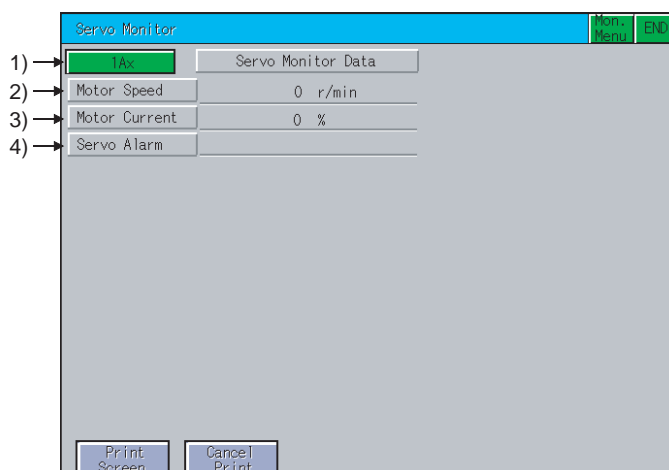
The table below shows the functions of the keys used for operation of the positioning monitor screen.

Key	Function
 (Display example: When axis 1 is monitored)	Changes the axes to be monitored.
	Returns to the previous screen.
	Returns to the monitor menu screen.
	Exits the positioning monitor and returns to the screen where the Q motion monitor was started.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following:  8.4.11 Hard copy output
	The operation of this key is invalid.

8.4.8 Servo Monitor screen

This section describes the display data of the Servo Monitor screen and the key functions displayed on the screen.

1 Displayed contents



No.	Item	Description
1)	Ax	Displays the axis number currently being monitored.
2)	Motor Speed	Displays the actual speed of the servo motor.
3)	Motor Current	Displays the motor current value at the rated current of 100%.
4)	Servo Alarm	Displays the alarm detected by the servo amplifier.

2 Key functions

The table below shows the functions of the keys that are used for operation of the servo monitor screen.

Key	Function
 (Display example: When axis 1 is monitored)	Changes the axes to be monitored.
	Returns to the monitor menu screen.
	Exits the servo monitoring and returns to the screen where the Q motion monitor was started.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following: 8.4.11 Hard copy output
	The operation of this key is invalid.

8.4.9 Present Value History Monitor screen

This section describes the display data of the Present Value History Monitor screen and the key functions displayed on the screen.







1 Displayed contents

Item	M/ D	H: M	Encoder PV Multi Rev/1Rev	SV CMD Val	Monitor PV	ALM
HP Data	12/14	10:38	0H•	0H	3BFF62H	0 ----
MON Val	12/14	10:38	0H•	0H	3B1454H	-4591.0000 ----
Nw PWR ON1	12/14	10:38	FEFEH•	26950H	0H	0.0000 0
PWR OFF1	0/ 0	0: 0	0H•	0H	0H	0.0000 ----
PWR ON2	0/ 0	0: 0	0H•	0H	0H	0.0000 0
PWR OFF2	0/ 0	0: 0	0H•	0H	0H	0.0000 ----
PWR ON3	0/ 0	0: 0	0H•	0H	0H	0.0000 0
PWR OFF3	0/ 0	0: 0	0H•	0H	0H	0.0000 ----
Od PWR ON4	0/ 0	0: 0	0H•	0H	0H	0.0000 0

No.	Item	Description
1)	Ax	Displays the axis number of the axis currently being monitored.
2)	HP Data	Displays the following values monitored at home position return. <ul style="list-style-type: none"> • Home position return completion time • Encoder present value <ul style="list-style-type: none"> Multi-revolution data of absolute position reference point data Within-one-revolution position of absolute position reference point data • Servo command value • Monitor present value
3)	MON Val	Displays the following present monitor values. <ul style="list-style-type: none"> • Present time • Encoder present value <ul style="list-style-type: none"> Present multi-revolution data of encoder present value Present within-one-revolution position of encoder present value • Present servo command value • Present monitor present value
4)	PWR ON/PWR OFF	Displays the four past present values of the ABS axis at servo amplifier power-on/off. <ul style="list-style-type: none"> [At power-on] <ul style="list-style-type: none"> • Power-on time • Encoder present value <ul style="list-style-type: none"> Multi-revolution data of initial encoder Single-revolution data of initial encoder • Servo command value after recovery • Monitor present value after recovery • Alarm occurrence information at present value recovery (error code of minor/major error) [At power-off] <ul style="list-style-type: none"> • Servo amplifier power-off time • Encoder present value <ul style="list-style-type: none"> Multi-revolution data of encoder present value before servo amplifier power-off Single-revolution data of encoder present value before servo amplifier power-off • Servo command at servo amplifier power-off • Monitor present value at servo amplifier power-off

2 Key functions

The table below shows the functions of the keys used for operation of the Present Value History Monitor screen.

Key	Function
 (Display example: When axis 1 is monitored)	Changes the axes to be monitored.
	Returns to the monitor menu screen.
	Exits the Present Value History Monitor screen and returns to the screen where the Q motion monitor was started.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following:  8.4.11 Hard copy output
	The touch operation of this key is invalid.

8.4.10 Parameter setting screen

You can set the servo parameters (basic parameters/adjustment parameters) of the connected motion controller CPU.









This section describes the display data of the parameter setting screen and the key functions displayed on the screen.

1 Displayed screen



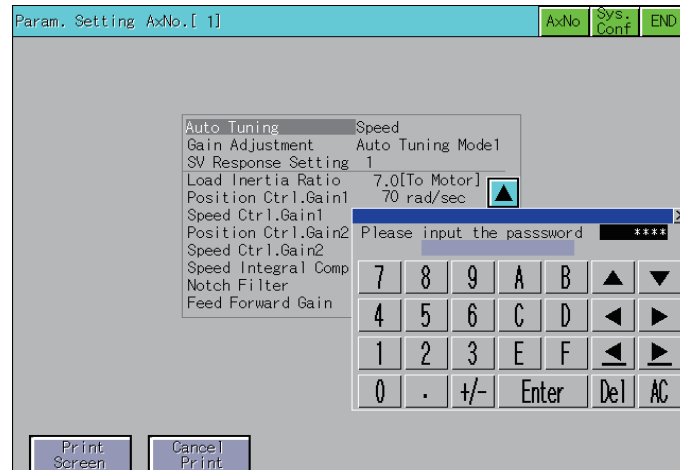
2 Key functions

The table below shows the functions of the keys that are used with the operation on the parameter setting screen.

Key	Function
	Changes the servo parameter setting of the selected item.
	Selects the servo parameter setting item.
	Changes the axis whose parameter setting will be made.
	Returns to the System Configuration screen.
	Exits the parameter setting and returns to the screen where the Q motion monitor was started.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following:  8.4.11 Hard copy output
	The touch operation of this key is invalid.

3 Inputting the password

The password input key window appears for accessing the parameter setting screen when the password setting data for changing motion parameters is written to the GOT with GT Designer2.



(1) Function

- If the password matches, the parameter setting screen is displayed.
- If the password does not match, an error message is displayed. Touching **Sys. Conf** returns to the System Configuration screen.
- Only numbers and letters A to F can be used for the password setting. (Up to 8 characters)
- The password for changing the motion parameters is set with GT Designer2.
Refer to GT Designer2 Version □ Screen Design Manual (3.5 Password Setting) for details on setting the password.

(2) Operations

(a) Inputting the password

Touch the key window and enter a password.

After entering the password, touch **Enter** to set the password.

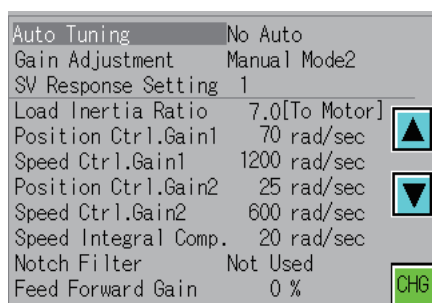
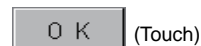
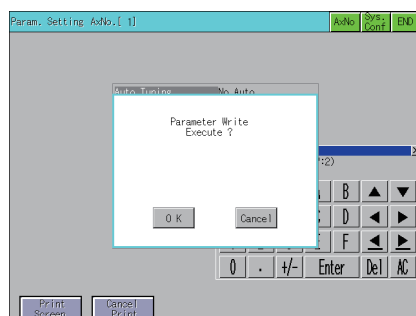
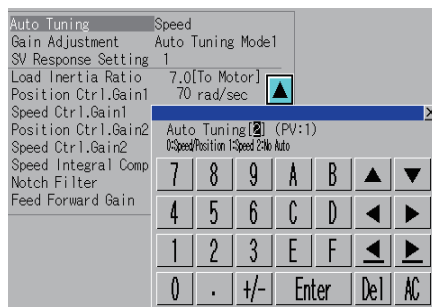
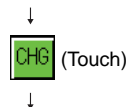
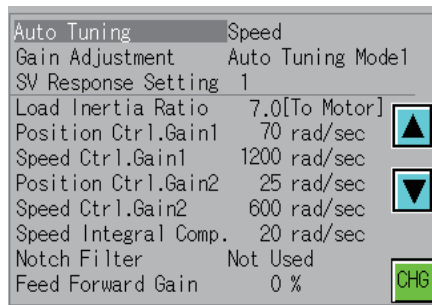
To edit the input characters, touch **Del** to delete the characters, and then input the new characters.



(b) Canceling password input


Touch **×** to return to the monitor screen.

4 Parameter setting operation

The following describes the procedure of changing the setting of the [Auto Tuning] item as an example of the parameter setting operation.



- 1 Select the item whose parameter is to be set with the ,  keys, and touch the **CHG** key.

- 2 As the parameter setting window appears, enter the parameter setting with **Alphanumeric**, and touch **Enter** to confirm the setting.
To cancel the parameter setting operation, touch  at the top right of the screen to close the parameter setting window.

- 3 As the confirmation window appears, touch **OK** to write the parameter setting to the motion controller CPU.
To cancel writing of the parameter setting, touch **Cancel**.

- 4 After writing is completed, the parameter setting screen whose display has been updated to the new parameter setting is displayed.

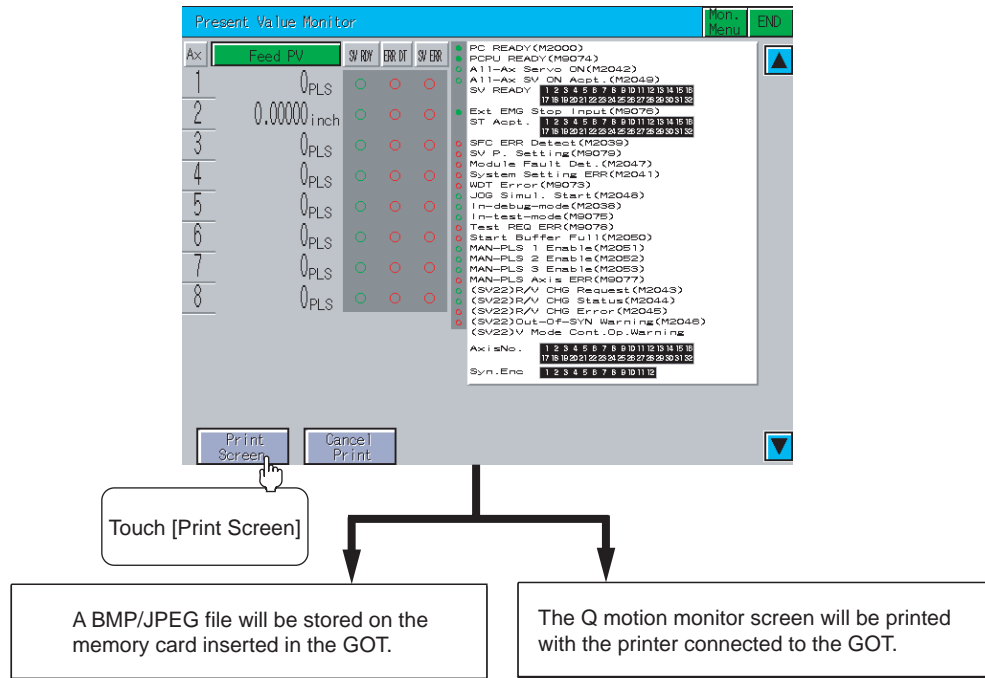
8.4.11 Hard copy output

This section describes how to store a screen to the memory card in BMP/JPEG file format or print it with a printer when executing the Q motion monitor.

Hard copy methods differ depending on the GOT to be used.

(1) GOT with VGA or higher resolution

Hard copy output operations are performed by touching the "Print Screen" or "Cancel Print" key displayed on the screen.



(2) GOT with QVGA resolution

Hard copy output operations are performed by turning ON/OFF the start or abort trigger device that has been set in the GT Designer2.



- Install the extended function OS (Printer) to the GOT when printing a Q motion monitor screen.
- The output target (CF card/printer) of hard copy can be set in [Hard Copy] of GT Designer2.

For details of the hard copy setting, refer to the following.





GT16 User's Manual (Chapter 13 DATA CONTROL)
GT15 User's Manual (Chapter 13 FILE DISPLAY AND COPY)



GT Designer2 Version□ Screen Design Manual (Section 13.2 Hard Copy)

8.5 Error Messages and Corrective Action

This section describes the error messages that may be displayed during Q motion monitor operation and their corrective action.

Error message	Error definition	Corrective action
No. PLC Communications	Communication cannot be established with the PLC CPU of the monitor target.	<ul style="list-style-type: none"> Check the status of the connection between the controller and the GOT (disconnected or cut cables). Check if an error has occurred in the controller.
This PLC type is not supported	A motion controller CPU that cannot be monitored was selected on the System Configuration screen.	Select a motion controller CPU that can be monitored on the System Configuration screen. ( 8.2.1 1 Target motion controller CPU of the Q motion monitor)
Controller's OS type is different	The motion controller OS installed in the motion controller CPU (Q172CPU, Q173CPU) of the monitor target is other than SV13 or SV22.	Install SV13 or SV22 in the motion controller CPU (Q172CPU, Q173CPU) of the monitor target as the motion controller OS.
It is not a version for GOT	The version of the motion controller OS installed in the motion controller CPU of the monitor target is not compatible with the Q motion monitor.	Install a motion controller OS that is compatible with the Q motion monitor in the motion controller. ( GT Designer2 Version □ Screen Design Manual (2.7 Controllers that can be Monitored and the Access Range))
Monitor data not found	The monitor data was not installed or was deleted.	Download the monitor data of the motion monitor.
Unused axis selected	The axis number selected has not been set.	<ul style="list-style-type: none"> Select the axis number that has been set. Set the axis using the peripheral software.
It is not possible to select	During servo parameter setting, an item that cannot be set has been selected.	Select an item that can be set.
Incorrect setting range	A value that is outside the setting range has been set.	Set the value within the setting range.
Unmatched password	The password that was input as the motion parameter changing password is incorrect.	Input the correct password.
Communication channel setup error	A communication driver that is compatible with the Q motion monitor is not installed.	Install a compatible communication driver.



How to clear a displayed error message

For errors that occur with the connection to a controller (communication error, etc.), the error message does not disappear even after the cause of the error has been removed.

To delete the error message, restart the GOT.

9. SERVO AMPLIFIER MONITOR



9.1 Features

Various monitor functions, changes to the parameter settings and test operations can be performed on the servo amplifier connected to the GOT.
The features of the servo amplifier monitor are described below.

1 Real-time display of the servo amplifier status (9.4.3 9.4.4)

A list of the status of the servo amplifier connected to the GOT and the alarm details can be displayed in real-time.

(Display examples)

Monitor

MR-J2S-A Servo amp.Monitor [0St]		Menu	End
Cumulative feedback pulses	4489753 pulse	Peak load ratio	8 %
Servo motor speed	400 r/min	Instantaneous torque	0 %
Droop pulses	3273 pulse	Within one-revolution position	120877 pulse
Cumulative command pulses	2165791 pulse	ABS counter	-19979 rev
Command pulse frequency	20 kpps	Load inertia moment ratio	16.0 times
Analog speed command voltage	0.01 V	Bus voltage	277 V
Analog torque command voltage	0.06 V		
Regenerative load ratio	0 %		
Effective load ratio	2 %		
Clear			
Print Screen Cancel Print			

- Displays monitor data of the servo amplifier in a list.

Alarm display

MR-J2S-A Servo amp.Monitor [0St]		Menu	End
Alarm Number	AL20		
Alarm Name	Encoder error 2		
Time of Alarm	10:03:46		
Cause of Alarm	<div> 1)Encoder connector disconnected. 2)Encoder cable faulty. </div>		
Reset			
AlarmHist			
Print Screen Cancel Print			

- Displays the details (number, name, occurrence time and cause of alarm) of the alarm currently occurring in the servo amplifier. The alarm can also be reset.

2 Various diagnostics of the servo amplifier can be performed (9.4.5)

There are multiple diagnostics functions to enable various diagnostics of the servo amplifier to be performed.

(Display examples)

DI/DO display

- Displays a list of the ON/OFF status of the external I/O signals of the servo amplifier.

Amplifier information display

- Displays the servo amplifier software number and servo motor information (model name, ID and encoder resolution).

3 Writing of the servo parameters is enabled (9.4.6)

The servo amplifier parameters can be read, changed and written to the servo amplifier.

4 Various test operations can be performed (9.4.6)

Various test operations can be performed on the connected servo amplifier.

(Display examples)

JOG operation

- The servo amplifier rotates while the Forward or Reverse key is touched.

Motor less operation

- Simulates motion of the servo motor within the servo amplifier even when the servo motor is not connected.

9.2 Specifications

9.2.1 System configuration

This section describes the system configuration of the servo amplifier monitor.
For connection type settings and precautions regarding the communication unit/cable and connection type, see the following manual.

 GOT1000 Series Connection Manual

1 Servo amplifiers targeted for the servo amplifier monitor

Servo amplifier
MELSERVO-J2-Super series
MELSERVO-J2M series
MELSERVO-J3 series

2 Connection type

(○ : Available, ✕ : Unavailable)

Function		Connection type between GOT and servo amplifier
Name	Description	Direct connection
Servo amplifier monitor	Servo amplifier monitor, changing the servo parameter settings and test operations	○

3 Required option OS and option function board

The option OS and option function board shown below are required.

Option OS	OS memory space (user area)			Option function board	
	GT16		GT15	GT16	GT15
	Built-in flash memory (ROM)	User memory (RAM)			
Servo amplifier monitor	390KB	770KB	524KB	Not required	GT15-FNB, GT15-QFNB16M, GT15-QFNB48M, GT15-QFNB, GT15-QFNB32M, GT15-MESB48M

(1) Option OS

Install the option OS in the above table to the GOT.


Refer to the following manual for the procedure for installing the option OS.

 GT Designer2 Version □ Basic Operation/Data Transfer Manual (8. TRANSFERRING DATA)

(2) OS memory space

The available memory space shown in the table above is required in the user area to install the option OS to the GOT.

Refer to the following manual for the procedure for checking the available memory space of the user area and information about the data using other user areas.

 GT Designer2 Version □ Basic Operation/Data Transfer Manual
(8.TRANSFERRING DATA)

(3) Option function board


(a) For GT16

No option function board is required.


(b) For GT15

Mount one of the option function boards in the above table on the GOT.

For the GOTs with a built-in option function board, refer to the following.

 1.1.2 Hardware and OS' required for each function

For how to mount an option function board on the GOT, refer to the following manual.

 GT15 User's Manual (8.10 Option Function Board)

4 List of servo amplifier types that can be monitored and functions

The list of servo amplifier types that can be monitored and their functions is shown below.

(○ : Monitoring is possible with the servo amplifier monitor X : Monitoring is not possible with the servo amplifier monitor - : Function unavailable)


Servo Amplifier		MR-J2-Super series		MR-J2M series		MR-J3 series
Function		MR-J2S-□A	MR-J2S-□CP	MR-J2M-P8A	MR-J2M-□DU	MR-J3-□A
Setup	Model selection	○	○	○	○	○
	Baud rate ^{*1}	○	○	○	○	○
	Station No. Selection ^{*1}	○	○	-	-	-
	Station selection	○	○	○	○	○
	Axis selection	-	-	○	○	-
	Automatic demo	X	-	-	X	X
Monitor	Display all	○	○	○	○	○
	High speed monitor	X	X	X	X	X
	Multi-axis listing	-	-	X	X	-
	Trend graph	X	X	-	X	X
	I/O Input/Output display ^{*2}	-	-	-	-	○
Alarm	Display	○	○	○	○	○
	History	○	○	○	○	○
	Amplifier data	X	X	X	X	X
Diagnostic	I/O display	○	○	○	-	-
	Function device display	-	○	○	○	-
	No motor rotation	X	X	-	X	X
	Total power-on time	X	X	X	X	X
	Software number display	○	○	○	○	○
	Motor data display	○	○	-	○	○
	Tuning data	X	X	-	X	X
	Amplifier information	○	○	○	○	○
	Absolute encoder data	○	○	-	○	○
	Automatic voltage control	X	-	-	-	-
	Axis name setting	X	X	-	X	X
	Unit composition listing	-	-	○	○	-
Parameters	Parameter list	○	○	-	-	○
	Tuning	X	X	-	X	X
	Change list	X	X	X	X	X
	IFU parameter	-	-	○	○	-
	DRU parameter	-	-	○	○	-
	Parameter copy	-	-	-	-	X
	Device setting	-	X	X	X	X
	Basic setting	-	-	-	-	○
	Gain/Filter	-	-	-	-	○
	Extension setting	-	-	-	-	○
Test	I/O setting	-	-	-	-	○
	Jog	○	○	-	○	○
	Positioning	○	○	-	○	○
	Operation w/o motor	○	○	-	○	○
	Forced output	○	○	○	-	○
	Program test	X	-	-	X	X
	Single-step feed	-	X	-	-	-

(Continued to next page)

(○ : Monitoring is possible with the servo amplifier monitor ✕ : Monitoring is not possible with the servo amplifier monitor - : Function unavailable)

Servo Amplifier		MR-J2-Super series		MR-J2M series		MR-J3 series
		MR-J2S-□A	MR-J2S-□CP	MR-J2M-P8A	MR-J2M-□DU	MR-J3-□A
Point-data	Point table	-	✕	-	-	-
Advanced-function	Machine analyzer	✕	-	-	✕	✕
	Gain search	✕	-	-	✕	✕
	Machine simulation	✕	-	-	✕	✕
	Robust disturbance compensation	-	-	-	-	✕

*1 Set the baud rate and station number setting with Communication Settings.
Refer to the following manual for setting Communication Settings.

 GT Designer2 Version □ Screen Design Manual (3.7 Communication Interface Setting (Communication Settings))

*2 For the MR-J3 series, it is displayed with "I/O display" in "Diagnostic".

5 Required special data

The following special data is required.

- (a) When using GT16 □ □ M-X, GT16 □ □ M-S, GT15 □ □ -X, GT15 □ □ V-S, and GT15 □ □ -S

(- : Unavailable)

Function details			Stored screen data	Memory space (KB)				
				For MR-J2S-□A monitoring	For MR-J2S-□CP monitoring	For MR-J2M-P8A monitoring	For MR-J2M-□DU monitoring	For MR-J3-□A monitoring
Servo amplifier monitor data common information				21.0				
Monitor		600 "Monitor: ALL"	4.4					
Alarm	Alarm display	602 "Alarm: ALL"	2.6					
	Alarm history	604 "Alarm Hist.: ALL"	3.3					
Diagnostics function	DI/DO display	610 "I/O Display: S-A"	2.7	-	-	-	-	
		611 "I/O Display: S-CP"	-	3.0	-	-	-	
		612 "I/O Display: M-A IFU"	-	-	4.8	-	-	
		613 "I/O Display: M-A D01"	-	-	-	3.9	-	
		614 "I/O Display: J3-A"	-	-	-	-	2.8	
	Function device display	620 "Function Dev.: S-CP"	-	3.3	-	-	-	
		621 "Function Dev.: M-A IFU"	-	-	5.1	-	-	
		622 "Function Dev.: M-A DRU"	-	-	-	5.1	-	
	Amplifier information display	630 "Amp inf.: S-A"	2.4	-	-	-	-	
		631 "Amp inf.: S-CP"	-	2.5	-	-	-	
		632 "Amp inf.: M-A IFU"	-	-	2.4	-	-	
		633 "Amp inf.: M-A DRU"	-	-	-	2.6	-	
		634 "Amp inf.: J3-A"	-	-	-	-	2.7	
	ABS data display	640 "ABS data: S-A/J3-A"	2.9	-	-	-	2.9	
		642 "ABS data: S-CP"	-	3.4	-	-	-	
		644 "ABS data: M-A DRU"	-	-	-	3.4	-	
	Unit composition list display	647 "Unit Comp.: M-A IFU"	-	-	3.8	-	-	
		648 "Unit Comp.: M-A DRU"	-	-	-	3.8	-	
Parameter setting		650 "Parameters: S-"	4.4		-	-	-	
		651 "Parameters: M-A IFU"	-	-	4.6		-	
		652 "Parameters: M-A DRU"	-	-	5.0		-	
		653 "Parameter Basic setting: J3-A"	-	-	-	-	5.1	
		654 "Parameters Gain/Filter: J3-A"	-	-	-	-	5.2	
		655 "Parameters Ext. setting: J3-A"	-	-	-	-	5.2	
		656 "Parameters I/O setting: J3-A"	-	-	-	-	5.2	
Test	JOG operation	660 "JOG operation: S-*/J3-A"	3.8		-	-	3.8	
		661 "JOG operation: M-A DRU"	-	-	-	3.5	-	
	Positioning operation	663 "Positioning: S-"	3.8		-	-	-	
		664 "Positioning: M-A DRU"	-	-	-	3.6	-	
		665 "Positioning: J3-A"	-	-	-	-	4.3	
	Motor-less operation	666 "Motor-less op: S-*/J3-A"	2.7		-	-	2.7	
		667 "Motor-less op: M-A DRU"	-	-	-	2.5	-	
	DO forced output	669 "DO Forced Out: S-A"	4.1	-	-	-	-	
		670 "DO Forced Out: S-CP"	-	3.8	-	-	-	
		671 "DO Forced Out: M-A IFU"	-	-	8.2	-	-	
672 "DO Forced Out: M-A D01"		-	-	3.8	-	-		
673 "DO Forced Out: J3-A"		-	-	-	-	4.0		

(b) When using GT15 □ □ -V

(- : Unavailable)

Function details			Stored screen data	Memory space (KB)				
				For MR-J2S-□A monitoring	For MR-J2S-□CP monitoring	For MR-J2M-P8A monitoring	For MR-J2M-□DU monitoring	For MR-J3-□A monitoring
Servo amplifier monitor data common information				21.0				
Monitor		600 "Monitor: ALL"	4.4					
Alarm	Alarm display	602 "Alarms: ALL"	2.6					
	Alarm history	604 "Alarms Hist.: ALL"	3.3					
Diagnostics function	DI/DO display	610 "I/O Display: S-A"	2.7	-	-	-	-	
		611 "I/O Display: S-CP"	-	3.0	-	-	-	
		612 "I/O Display: M-A IFU"	-	-	4.8	-	-	
		613 "I/O Display: M-A D01"	-	-	3.9	-	-	
		614 "I/O Display: J3-A"	-	-	-	-	2.7	
	Function device display	620 "Function Dev.: S-CP"	-	3.3	-	-	-	
		621 "Function Dev.: M-A IFU"	-	-	5.3	-	-	
		622 "Function Dev.: M-A DRU"	-	-	-	5.3	-	
	Amplifier information display	630 "Amp inf.: S-A"	2.4	-	-	-	-	
		631 "Amp inf.: S-CP"	-	2.5	-	-	-	
		632 "Amp inf.: M-A IFU"	-	-	2.4	-	-	
		633 "Amp inf.: M-A DRU"	-	-	-	2.6	-	
		634 "I/O Display: J3-A"	-	-	-	-	2.7	
	ABS data display	640 "ABS data: S-A/J3-A"	2.4	-	-	-	2.9	
		642 "ABS data: S-CP"	-	3.4	-	-	-	
		644 "ABS data: M-A DRU"	-	-	-	3.4	-	
	Unit composition list display	647 "Unit Comp.: M-A IFU"	-	-	3.8	-	-	
		648 "Unit Comp.: M-A DRU"	-	-	-	3.8	-	
Parameter setting		650 "Parameters: S-**"	4.4		-	-	-	
		651 "Parameters: M-A IFU"	-	-	4.6		-	
		652 "Parameters: M-A DRU"	-	-	-	5.0	-	
		653 "Parameters Basic setting: J3-A"	-	-	-	-	5.2	
		654 "Parameters Gain/Filter: J3-A"	-	-	-	-	5.2	
		655 "Parameters Ext. setting: J3-A"	-	-	-	-	5.2	
		656 "Parameters I/O setting: J3-A"	-	-	-	-	5.2	
Test	JOG operation	660 "JOG operation: S-*/J3-A"	3.8		-	-	3.8	
		661 "JOG operation: M-A DRU"	-	-	-	3.5	-	
	Positioning operation	663 "Positioning: S-**"	3.8		-	-	-	
		664 "Positioning: M-A DRU"	-	-	-	3.6	-	
		665 "Positioning: J3-A"	-	-	-	-	4.3	
	Motor-less operation	666 "Motor-less op: S-*/J3-A"	2.7		-	-	2.7	
		667 "Motor-less op: M-A DRU"	-	-	-	2.5	-	
	DO forced output	669 "DO Forced Out: S-A"	4.1	-	-	-	-	
		670 "DO Forced Out: S-CP"	-	3.8	-	-	-	
		671 "DO Forced Out: M-A"	-	-	8.2	-	-	
672 "DO Forced Out: M-A D01"		-	-	3.9	-	-		
673 "DO Forced Out: J3-A"		-	-	-	-	4.0		

(c) When using GT155 □-V

(- : Unavailable)

Function details			Stored screen data	Memory space (KB)				
				For MR-J2S-□A monitoring	For MR-J2S-□CP monitoring	For MR-J2M-P8A monitoring	For MR-J2M-□DU monitoring	For MR-J3-□A monitoring
Servo amplifier monitor data common information				42.0				
Monitor		600 "Monitor: ALL"	2.5					
Alarm	Alarm display	602 "Alarms: ALL"	1.8					
	Alarm history	604 "Alarms Hist.: ALL"	2.3					
Diagnostics function	DI/DO display	610 "I/O Display: S-A"	2.2	-	-	-	-	
		611 "I/O Display: S-CP"	-	2.4	-	-	-	
		612 "I/O Display: M-A IFU"	-	-	3.7	-	-	
		613 "I/O Display: M-A D01"	-	-	-	3.1	-	
		614 "I/O Display: J3-A"	-	-	-	-	2.0	
	Function device display	620 "Func. Dev.: S-CP"	-	2.4	-	-	-	
		621 "Func. Dev. In1: M-A IFU"	-	-	3.1	-	-	
		622 "Func. Dev. In2: M-A IFU"	-	-	3.1	-	-	
		623 "Func. Dev. Out1: M-A IFU"	-	-	3.2	-	-	
		624 "Func. Dev. Out2: M-A IFU"	-	-	2.7	-	-	
		625 "Func. Dev. In1: M-A DRU"	-	-	-	3.1	-	
		626 "Func. Dev. In2: M-A DRU"	-	-	-	3.0	-	
		627 "Func. Dev. Out1: M-A DRU"	-	-	-	3.1	-	
	628 "Func. Dev. Out2: M-A DRU"	-	-	-	2.7	-		
	Amplifier information display	630 "Amp inf.: S-A"	1.6	-	-	-	-	
		631 "Amp inf.: S-CP"	-	1.7	-	-	-	
		632 "Amp inf.: M-A IFU"	-	-	1.6	-	-	
		633 "Amp inf.: M-A DRU"	-	-	-	1.8	-	
		634 "Amp. inf.1: J3-A"	-	-	-	-	2.1	
	ABS data display	635 "Amp. inf. 2: J3-A"	-	-	-	-	2.1	
		640 "ABS data Cur.: S-A/J3-A"	1.9	-	-	-	1.9	
		641 "ABS data Orig: S-A/J3-A"	2.0	-	-	-	2.0	
		642 "ABS data Cur.: S-CP"	-	2.2	-	-	-	
		643 "ABS data Orig: S-CP"	-	2.2	-	-	-	
	Unit composition list display	644 "ABS data Cur.: M-A DRU"	-	-	-	2.2	-	
		645 "ABS data Orig: M-A DRU"	-	-	-	2.2	-	
		647 "Unit Comp.: M-A IFU"	-	-	2.8	-	-	
	648 "Unit Comp.: M-A DRU"	-	-	-	2.8	-		
Parameter setting		650 "Parameters: S-"	3.5		-	-	-	
		651 "Parameters: M-A IFU"	-	-	3.7	-	-	
		652 "Parameters: M-A DRU"	-	-	-	4.0	-	
		653 "Parameters Basic setting: J3-A"	-	-	-	-	4.2	
		654 "Parameters Gain/Filter: J3-A"	-	-	-	-	4.2	
		655 "Parameters Ext. setting: J3-A"	-	-	-	-	4.2	
		656 "Parameters I/O setting: J3-A"	-	-	-	-	4.2	
Test	JOG operation	660 "Jog operation: S-*/J3-A"	2.8		-	-	2.8	
		661 "Jog operation: M-A DRU"	-	-	-	2.5	-	
	Positioning operation	663 "Positioning: S-"	2.9		-	-	-	
		664 "Positioning: M-A DRU"	-	-	-	2.6	-	
		665 "Positioning: J3-A"	-	-	-	-	3.3	
	Motor-less operation	666 "Motor-less op: S-*/J3-A"	1.9		-	-	1.9	
		667 "Motor-less op: M-A DRU"	-	-	-	1.7	-	
	DO forced output	669 "DO Forced Out: S-A"	3.3	-	-	-	-	
		670 "DO Forced Out: S-CP"	-	3.1	-	-	-	
		671 "DO Forced Out: M-A IFU"	-	-	6.7	-	-	
672 "DO Forced Out: M-A D01"		-	-	-	3.0	-		
673 "DO Forced Out: J3-A"		-	-	-	-	3.3		

(1) Special data

Download the special data indicated in the table above to the GOT.

Refer to the following manual for the procedure for downloading the data.



GT Designer2 Version □ Basic Operation/Data Transfer Manual

(8. TRANSFERRING DATA)

(2) Memory space for special data

The available memory space shown in the table above is required in the user area to download the special data to the GOT.

Refer to the following manual for the procedure for checking the available memory space of the user area and information about the data using other user areas.




GT Designer2 Version □ Basic Operation/Data Transfer Manual




(8. TRANSFERRING DATA)

9.2.2 Access range

The access range is the same as the access range when the GOT is connected to a controller. Refer to the following manual for details of the access range.

 GT Designer2 Version ☐ Screen Design Manual (2.7 Controller that can be Monitored and the Accessible Range)

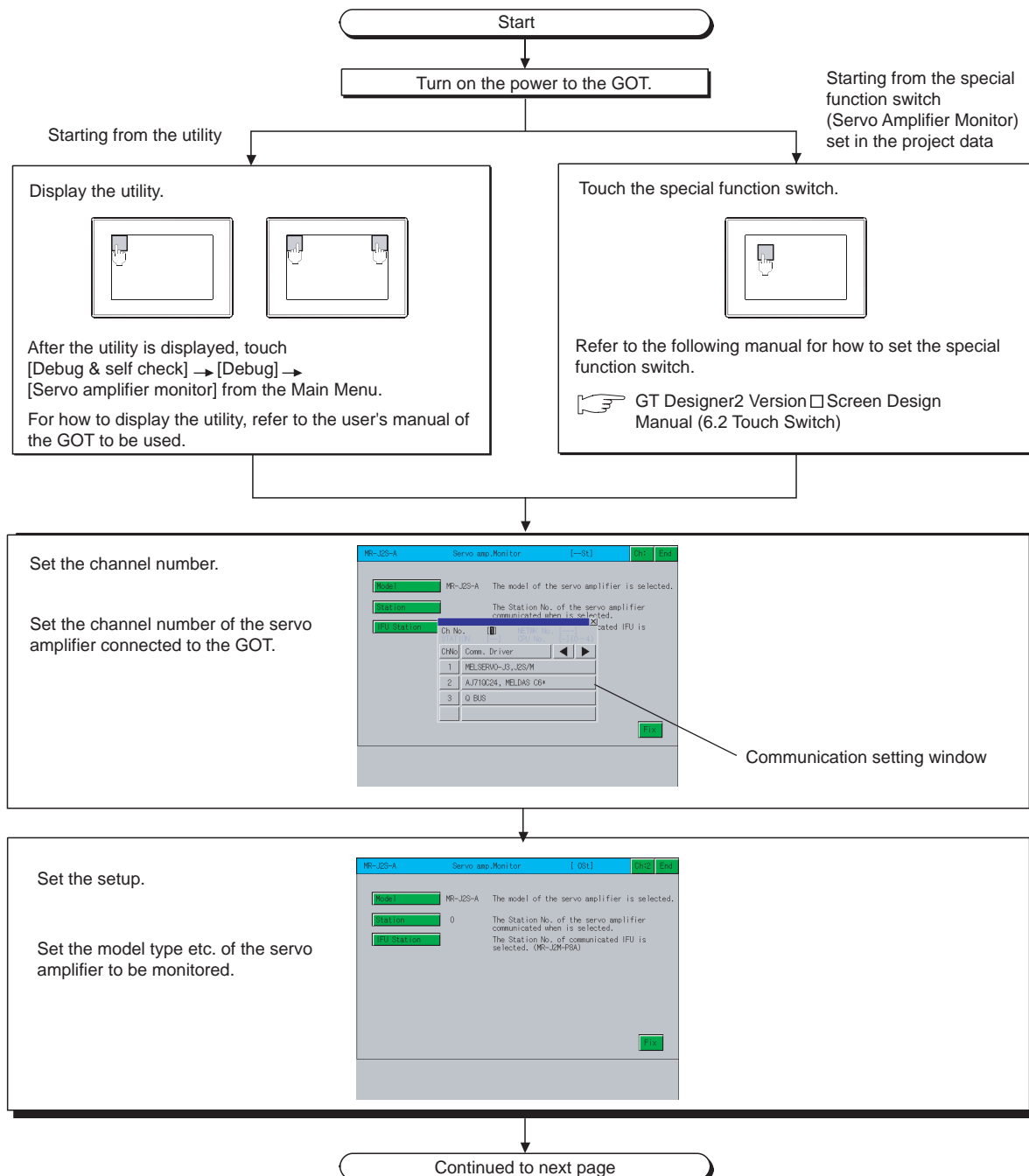
9.2.3 Precautions

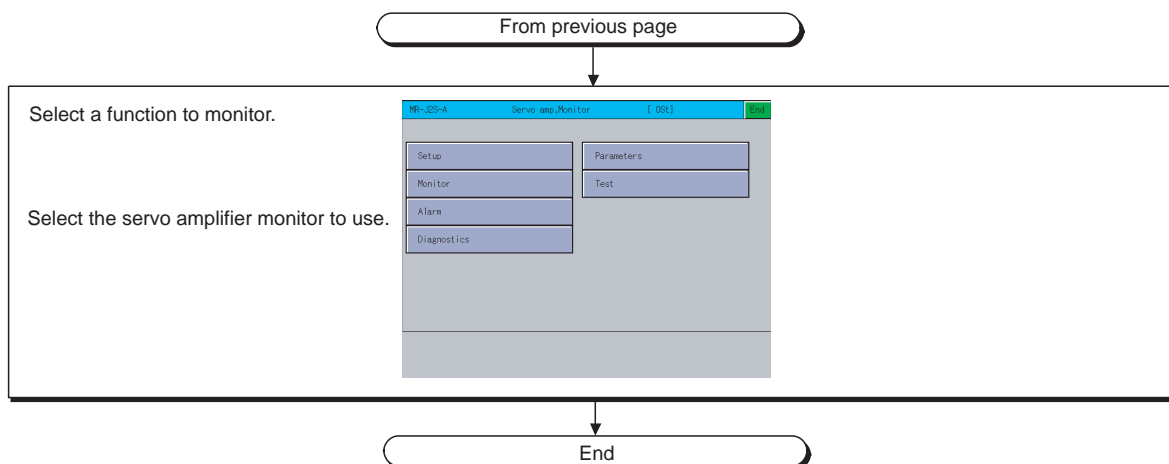
- (1) Before using the servo amplifier monitor
Read the manual of the connected servo amplifier carefully and make sure you understand the contents before performing servo amplifier monitoring.
- (2) Test operation
Be sure to read the precautions listed below before performing a test operation.
 9.4.7 Test operations
- (3) Time displayed on the servo amplifier monitor
If the time data of the GOT is incorrect, the time on the servo amplifier monitor will not be displayed correctly.
Refer to the following manual for the GOT clock data.
 GT Designer2 Version ☐ Screen Design Manual (2.5 Clock Function)
- (4) Setting details
Use the same settings for the servo amplifier monitor on the GOT (Setup screen ( 9.4.2)) and the servo amplifier.
If the settings are different, proper communications may not be performed.
- (5) Servo amplifier monitored
One servo amplifier can be selected to be monitored among 32 servo amplifiers.
If multiple servo amplifiers are connected, select one servo amplifier to monitor.

9.3 Display

1 Operation procedure until the start of the servo amplifier monitor

This section describes the flow until the servo amplifier monitor operation screen is displayed after the servo amplifier monitor (Option OS) is installed in the GOT.



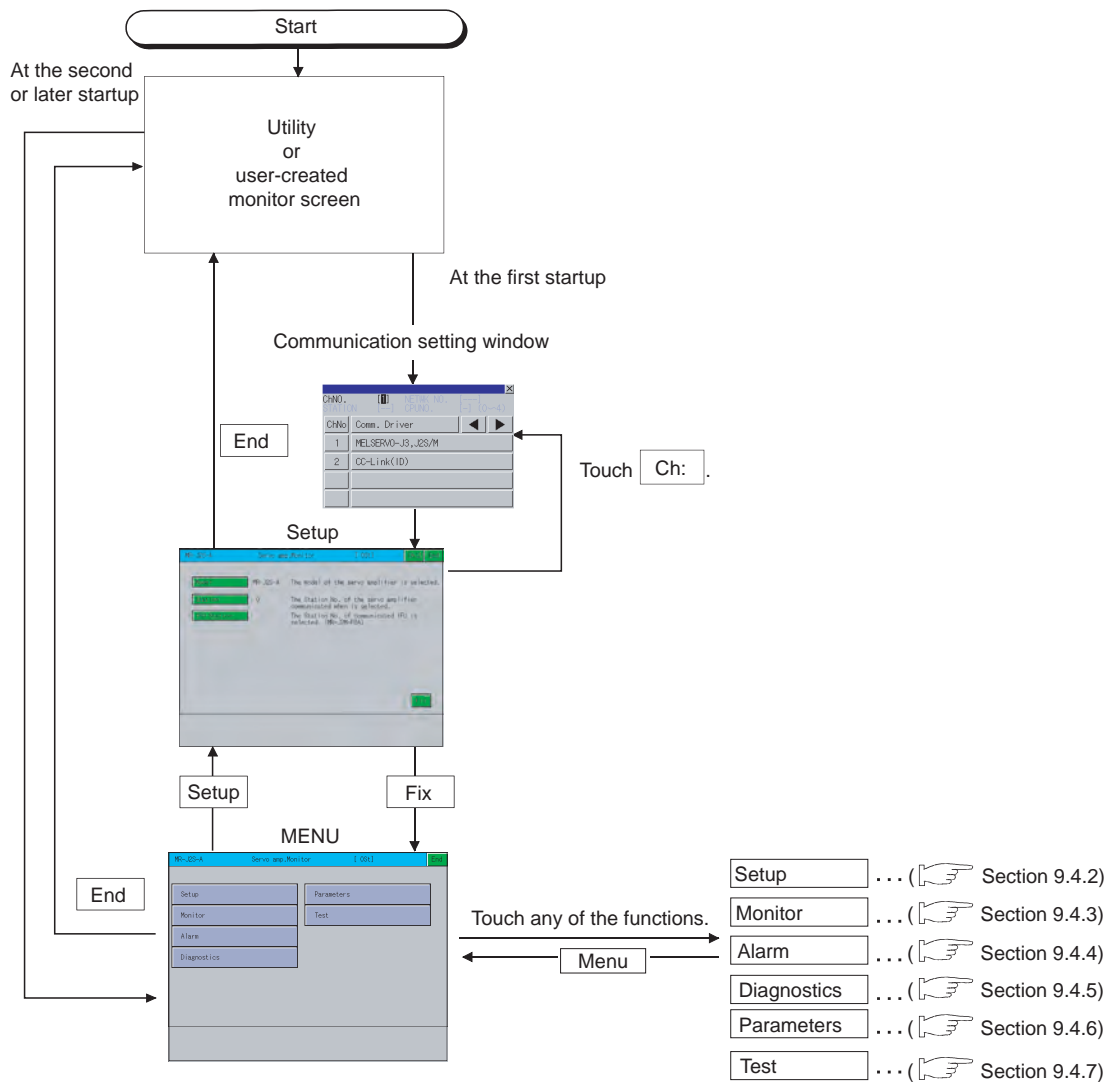


Point

- (1) How to display the utility
For how to display the utility, refer to the following.
 (👉 GT16 User's manual (8.3 Utility Display)
 GT15 User's manual (9.3 Utility Display))
- (2) Displaying communication setting window
After turning on the GOT, the communication setting window is displayed at the first startup of the servo amplifier monitor only.
For displaying the communication setting window at the second or later startup, touch the Ch: button on the servo amplifier monitor screen.
 (👉 9.4 Operations of Servo Amplifier Monitor Screens)
- (3) If the project data has not been downloaded
The servo amplifier monitor can be started from the utility even if the project data has not been downloaded to the GOT.

2 Changing screens

The following describes how to change the screen.



To exit by touching **End**

At next startup of the servo amplifier monitor, the last exited screen is displayed.

If using the same screen frequently, exiting with the **End** button is convenient.

However, the last exited screen is not displayed if the servo amplifier monitor screen data was deleted due to an installation of the OS, turning the GOT power from off to on, or a reset.

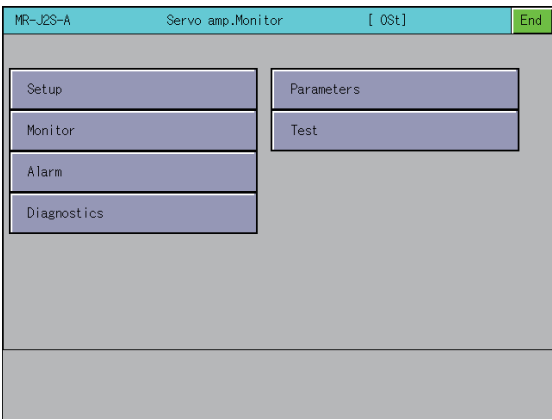
9.4 Operations of Servo Amplifier Monitor Screens

This section describes the operations of the screens when using the servo amplifier monitor. The display screen of the servo amplifier monitor varies slightly with the GOT used. This section mainly uses the screen of the GT1575-V for explanation.

9.4.1 Servo amplifier monitor

With the servo amplifier monitor, various monitor functions, parameter setting changes and test operations can be performed on the servo amplifier connected to the GOT. To display a function, make a selection on the function selection menu screen.

(Function selection menu screen)



- | | |
|-------------------------------------|---|
| 1) Setup
☞ 9.4.2) | Selects the servo amplifier type to monitor, the station number setting (station number selection), and the IFU station number. |
| 2) Monitor
☞ 9.4.3) | Displays all monitor data of the servo amplifier in real-time. |
| 3) Alarm
☞ 9.4.4) | Displays the alarm that is currently occurring and the history. Also resets the alarm and clears the history. |
| 4) Diagnostics.
☞ 9.4.5) | Performs the following various diagnostics on the connected servo amplifier. <ul style="list-style-type: none">▪ DI/DO display : Displays the ON/OFF status of the external I/O signals.▪ Function device display : Displays the ON/OFF status of the I/O function devices.▪ Amplifier information display : Displays the model name, ID and encoder resolution of the servo motor connected to the servo amplifier.▪ ABS data display : Displays the absolute position data of the absolute position detection system.▪ Unit composition list display : Displays a list of servo amplifier unit composition. |
| 5) Parameters.
☞ 9.4.6) | Displays the parameter data and changes the parameter settings. |
| 6) Test.
☞ 9.4.7) | Performs various test operations (JOG operation, positioning operation, motor-less operation and DO forced output). |

9.4.2 Setup

This is used to set the communication with the servo amplifier.

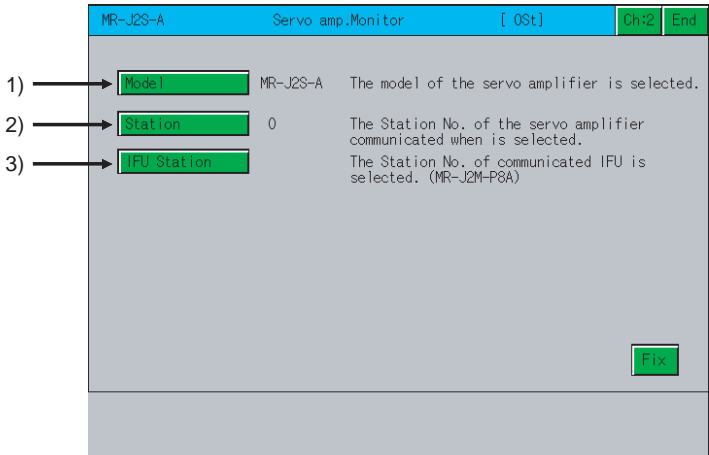


- (1) Before making the settings on the setup screen, also make the same settings on the servo amplifier side.
If the settings on this screen and the settings on the servo amplifier do not match, proper communications may not be performed.
- (2) The settings on the setup screen return to the initial state when the GOT is turned off or reset.
After turning on the power to the GOT, perform the settings on the setup screen again.

1 Setup screen

This section describes the display data of the setup screen and the key functions displayed on the screen.

(1) Displayed contents



* [Axis number] and [Capacity setting] cannot be set.

No.	Item	Description
1)	Model	Displays the model of the servo amplifier to be connected.
2)	Station	Displays the station number (00 to 31) of the servo amplifier to communicate with.
3)	IFU Station	Displays the serial communication station number of the IFU (interface unit).

(2) Key functions

The table below shows the functions of the keys that are used for the operations of the setup screen.

Key	Function
Model	Sets the model of the servo amplifier to be connected.
Station	Sets the station number (00 to 31) of the servo amplifier to communicate with.
IFU Station ^{*1}	Sets the serial communication station number of the IFU (interface unit).
Fix	Sets the setup details and returns to the function selection menu screen.
End	Exits the servo amplifier monitor.
Ch:2	Displays the communication setting window.

^{*1}: This is valid only when the MR-J2M A series is connected.

9.4.3 Monitor functions

Displays all monitor data of the servo amplifier in real-time.

1 Monitor screen

The following describes the display data of the monitor screen and the key functions displayed on the screen.

(1) Displayed contents

MR-J2S-A Servo amp. Monitor [0St]		Menu	End
1) Cumulative feedback pulses	173 pulse	Peak load ratio	1 %
2) Servo motor speed	0 r/min	Instantaneous torque	0 %
3) Droop pulses	0 pulse	Within one-revolution position	117540 pulse
4) Cumulative command pulses	0 pulse	ABS counter	-19789 rev
5) Command pulse frequency	0 kpps	Load inertia moment ratio	17.4 times
6) Analog speed command voltage	0.00 V	Bus voltage	279 V
7) Analog torque command voltage	0.04 V		
8) Regenerative load ratio	0 %		
9) Effective load ratio	0 %		
Clear			
Print Screen Cancel Print			

No.	Item	Description
1)	Cumulative feedback pulses	Counts the feedback pulses from the servo motor encoder and displays the result. <ul style="list-style-type: none"> When the set value exceeds "9999999", counting begins from "0". During reverse rotation, the – sign is added.
2)	Servo motor speed	Displays the speed of the servo motor. <ul style="list-style-type: none"> The value is displayed with the 0.1r/min unit rounded off. During reverse rotation, the – sign is added.
3)	Droop pulses	Displays the droop pulses of the deviation counter. <ul style="list-style-type: none"> During reverse rotation, the – sign is added.
4)	Cumulative command pulses	Counts the position command input pulses and displays the result. <ul style="list-style-type: none"> Since the value before multiplication of the electrical gear (CMX/CDV) is displayed, it may not match the cumulative feedback pulse display. During reverse rotation command, the – sign is added.
5)	Command pulse frequency	Displays the frequency of the position command input pulse. <ul style="list-style-type: none"> The value before multiplication of the electrical gear (CMX/CDV) is displayed. During reverse rotation command, the – sign is added.
6)	Analog speed command voltage (during speed control mode)*1	Displays the input voltage of the analog speed command (VC).
	Analog speed limit voltage (during torque control mode)*1	Displays the input voltage of the analog speed limit (VLA).
7)	Analog torque command voltage (during position/speed control mode)*1	Displays the voltage of the analog torque limit (TLA).
	Analog torque limit voltage (during torque control mode)*1	Displays the voltage of the analog torque limit (TC).

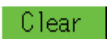





(Continued to next page)

*1: This is displayed only when the MR-J2S-□ A is connected.

No.	Item	Description
8)	Regenerative load ratio	Displays the ratio of the regenerative power to the permissible regenerative power in %. <ul style="list-style-type: none"> The permissible regenerative power differs depending on the presence/absence of the regenerative brake option. Set parameter No. 0 correctly according to the regenerative brake option. (Set to 80% or lower as a guide.)
9)	Effective load ratio	Displays the continuous effective load torque. <ul style="list-style-type: none"> The effective value is displayed on the assumption that the rated torque is 100%.
10)	Peak load ratio	Displays the maximum torque generated. <ul style="list-style-type: none"> The maximum value for the past 15 seconds is displayed on the assumption that the rated torque is 100%.
11)	Instantaneous torque	Displays the instantaneous torque. <ul style="list-style-type: none"> The value of the generated torque is displayed in real time on the assumption that the rated torque is 100%.
12)	Within one-revolution position	Displays the within one-revolution position in the servo motor in pulse units of the encoder. <ul style="list-style-type: none"> When the value exceeds the maximum pulse count, it returns to 0.
13)	ABS counter	Displays the distance from the home position (0) in the absolute position detection system as the multi-revolution counter value of the absolute position encoder.
14)	Load inertia moment ratio	Displays the estimated ratio of the servo motor shaft-equivalent load inertia moment to the servo motor's inertia moment.
15)	Bus voltage	Displays the voltage (between P and N) of the main circuit converter.

(2) Key functions

The table below shows the functions of the keys that are used for the operations on the monitor screen.

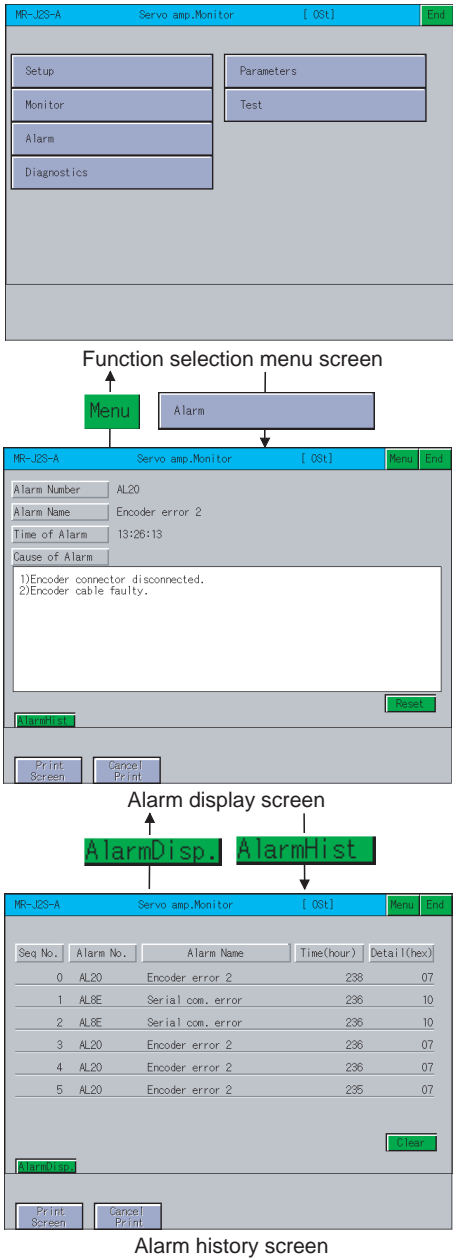
Key	Function
	Clears the values of [Cumulative feedback pulses] and [Cumulative command pulses] to 0.
	Returns to the function selection menu screen.
	Exits the servo amplifier monitor.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following:  8.4.11 Hard copy output
	The touch operation of this key is invalid.

9.4.4 Alarm function

The following alarms are displayed.

- Alarm display : Displays the alarm that is currently occurring. (☞ This section 1)
- Alarm history : Displays the history of alarms that occurred. (☞ This section 2)

The screen changes as follows after **Alarm** is selected on the function selection menu screen.

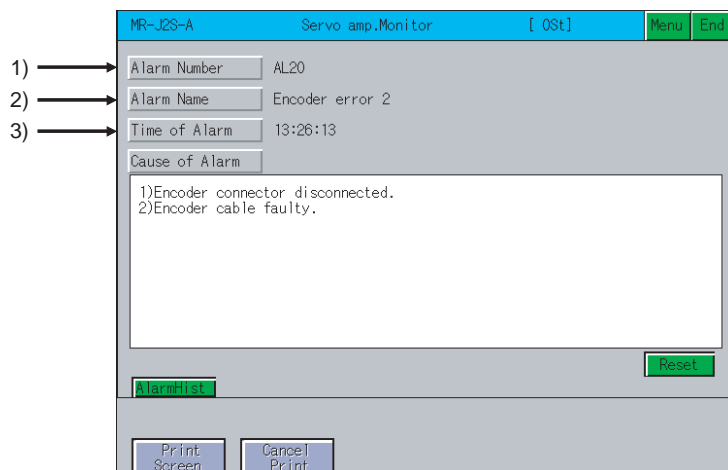


If the alarm display screen data has not been downloaded to the GOT, the message "Monitor data not found" is displayed and the subsequent screens are not displayed.

1 Alarm display screen

The following describes the display data of the alarm display screen and the key functions displayed on the screen.

(1) Displayed contents



No.	Item	Description
1)	Alarm Number	Displays the number of the alarm that occurred.
2)	Alarm Name	Displays the name of the alarm that occurred.
3)	Time of Alarm	<p>Displays the date and time when the alarm occurred.</p> <ul style="list-style-type: none"> The alarm occurrence time is displayed on the basis of the clock data of the GOT. If there is an error in the servo amplifier before it is connected to the GOT, an alarm is displayed when the servo amplifier is connected to the GOT. <p>In this case, the time when the servo amplifier is connected to the GOT is displayed as the alarm occurrence time.</p>

(2) Key functions

The table below shows the functions of the keys that are used for operations of the alarm display screen.

Key	Function
	<p>Resets the alarm.</p> <ul style="list-style-type: none"> The reset alarm is stored as the latest alarm.
	Changes to the alarm history screen (☞ This section 2).
	Returns to the function selection menu screen.
	Exits the servo amplifier monitor.
	<p>Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer.</p> <p>For further information about hard copies, refer to the following:</p> <p>☞ 9.4.8 Hard copy output</p>
	The touch operation of this key is invalid.

2 Alarm history screen

The following describes the display data of the alarm history screen and the key functions displayed on the screen.

(1) Displayed contents

Seq No.	Alarm No.	Alarm Name	Time(hour)	Detail(hex)
0	AL20	Encoder error 2	238	07
1	AL8E	Serial com. error	236	10
2	AL8E	Serial com. error	236	10
3	AL20	Encoder error 2	236	07
4	AL20	Encoder error 2	236	07
5	AL20	Encoder error 2	235	07

No.	Item	Description
1)	Seq No.	Displays the alarm history, starting from the latest alarm, in order. <ul style="list-style-type: none"> • Later alarms have smaller Seq Nos. (0 indicates the latest alarm) • Up to six alarms can be displayed in the alarm history.
2)	Alarm No.	Displays the number of the alarm that occurred.
3)	Alarm Name	Displays the name of the alarm that occurred.
4)	Time (hour)	Displays the energization time of the servo amplifier until alarm occurrence on the assumption that the time at factory shipment is "0".
5)	Detail (hex)	Displays the code for detailed alarm information.

(2) Key functions

The table below shows the functions of the keys that are used for operations of the alarm history screen.

Key	Function
	Clears the alarm history stored in the servo amplifier.
	Changes to the Alarm Display screen (This section).
	Returns to the function selection menu screen.
	Exits the servo amplifier monitor.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following: 9.4.8 Hard copy output
	The touch operation of this key is invalid.

9.4.5 Diagnostics function

This function performs the following various diagnostics on the connected servo amplifier.

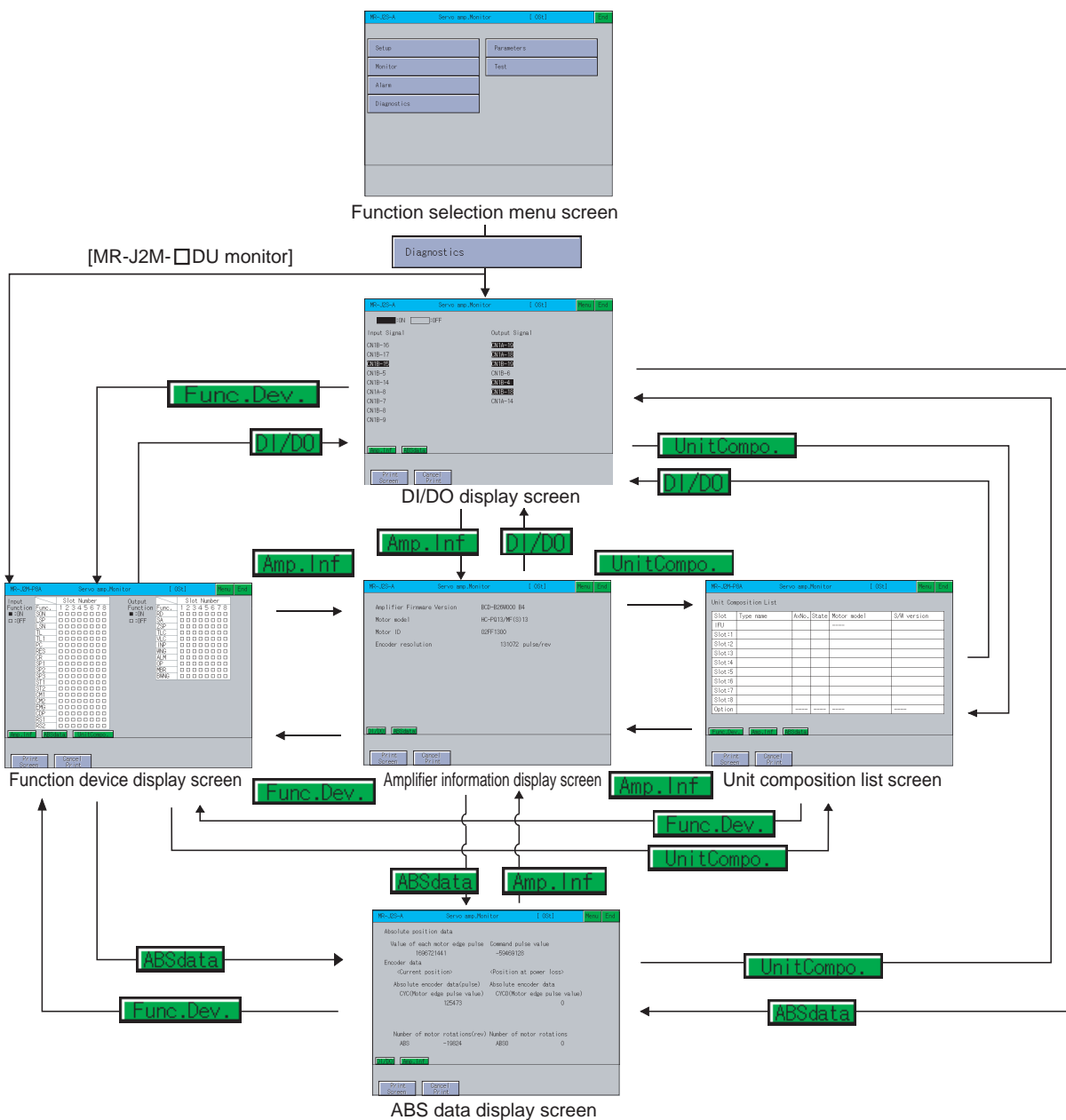
- DI/DO display: Displays the ON/OFF status of the external I/O signals. (☞ This section **1**)
- Function device display: Displays the ON/OFF status of the I/O function devices. (☞ This section **2**)
- Amplifier information display: Displays the model name, ID and encoder resolution of the servo motor connected to the servo amplifier. (☞ This section **3**)
- ABS data display: Displays the absolute position data of the absolute position detection system. (☞ This section **4**)
- Unit composition list display: Displays a list of servo amplifier unit compositions. (☞ This section **5**)

(1) Changing screens

The screen changes as follows after **Diagnostics** is selected on the function selection menu screen.

Depending on the model of the connected servo amplifier, some screens may not be displayed. Refer to the following for the screens that cannot be displayed.

☞ 9.2.1 **4** List of servo amplifier types that can be monitored and functions

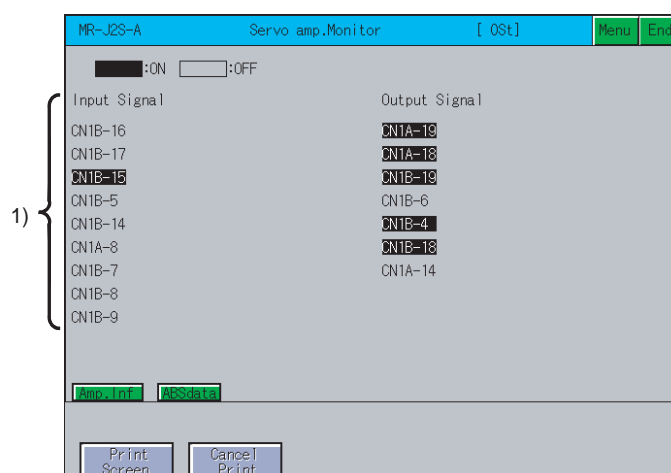


If the DI/DO display screen data or function device display screen data (only when monitoring the MR-J2M-□DU) has not been downloaded to the GOT, “Monitor data not found” is displayed and the subsequent screens are not displayed.

1 DI/DO display screen

The following describes the display data of the DI/DO display screen and the key functions displayed on the screen.

(1) Displayed contents



No.	Item	Description
1)	Input/Output Signal	Displays whether the DI/DO signal is ON (lit) or OFF (not lit).

(2) Key functions

The table below shows the functions of the keys that are used for the operations of the DI/DO display screen.

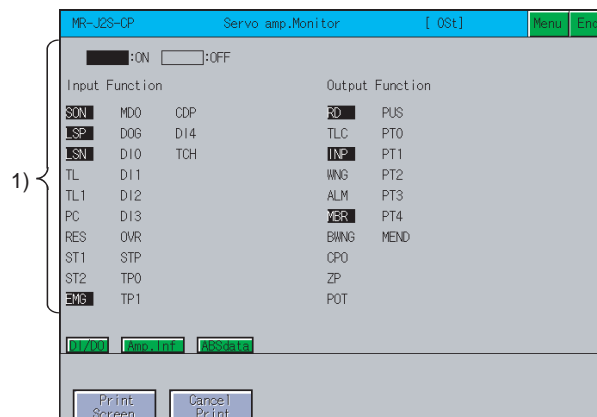
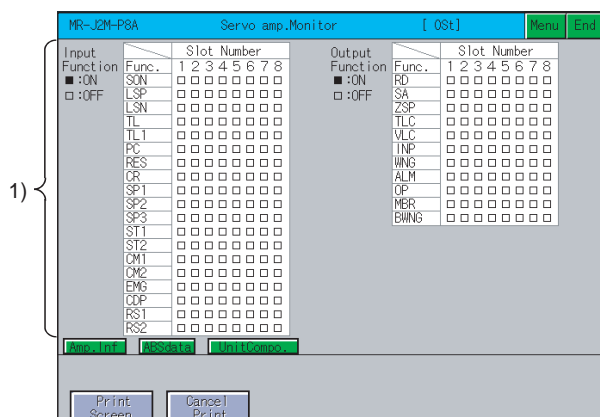
Key	Function
DOT *1	Displays the DI/DO signal of the extension IO unit.
Func.Dev.	Changes to the function device screen (☞ This section 2).
Amp.Inf	Changes to the amplifier information screen (☞ This section 3).
UnitCompo.	Changes to the unit composition list screen (☞ This section 5).
ABSdata	Changes to the ABS data screen (☞ This section 4).
Menu	Returns to the function selection menu screen.
End	Exits the servo amplifier monitor.
Print Screen	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following: ☞ 9.4.8 Hard copy output
Cancel Print	The touch operation of this key is invalid.

*1: This is displayed only when the MR-J2M A series is connected.

2 Function device display screen

The following describes the display data of the function device display screen and the key functions displayed on the screen.

(1) Displayed contents



[When MR-J2S- □CP is monitored]

No.	Item	Description
1)	Input/Output Function	Displays the ON (■) or OFF (□) status for each I/O signal.

(2) Key functions

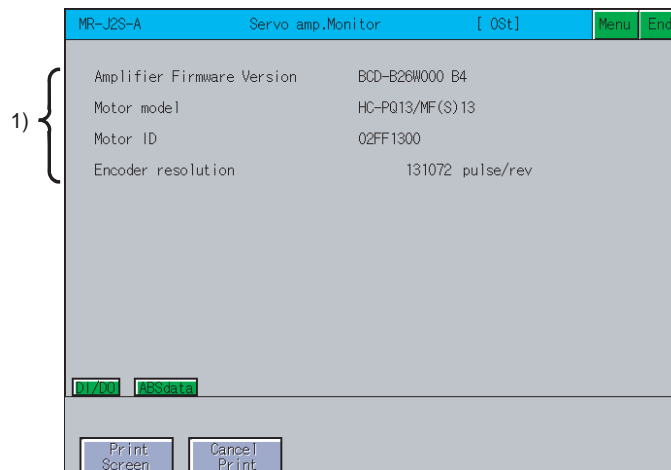
The table below shows the functions of the keys that are used for the operations of the function device display screen.

Key	Function
DI/DO	Changes to the DI/DO display screen (☞ This section 1).
ABSdata	Changes to the ABS data screen (☞ This section 4).
Amp.Inf	Changes to the amplifier information screen (☞ This section 3).
UnitCompo.	Changes to the unit composition list screen (☞ This section 5).
Menu	Returns to the function selection menu screen.
End	Exits the servo amplifier monitor.
Print Screen	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following: ☞ 9.4.8 Hard copy output
Cancel Print	The touch operation of this key is invalid.

3 Amplifier information display screen

The following describes the display data of the amplifier information display screen and the key functions displayed on the screen.

(1) Displayed contents



No.	Item	Description
1)	Servo amplifier model.*1	Displays the model name of the servo amplifier.
	Amplifier Firmware Version	Displays the software number of the servo amplifier connected to the GOT.
	Accumulated power-on time*1	Displays the cumulative time of the control power-on after the product was shipped from the factory.
	Num. of inrush cur. sw. time*1	Displays the number of times the rush relay has been turned on/off after the product was shipped from the factory.
	Optional card model*1	Displays the model name of the option card installed in the servo amplifier. If no option card is installed, then "No connection" is displayed.
	Motor model*2	Displays the model name of the servo motor connected to the servo amplifier.
	Motor ID*2	Displays the ID of the servo motor connected to the servo amplifier.
	Encoder resolution*2	Displays the encoder resolution of the servo motor connected to the servo amplifier.

*1 This is displayed only for the MR-J3 series.

*2 This is not displayed when monitoring the MR-J2M-P8A.

(2) Key functions

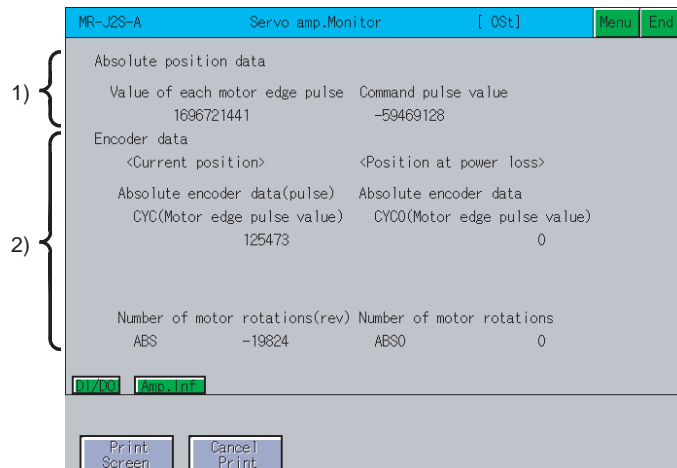
The table below shows the functions of the keys that are used for the operations of the amplifier information display screen.

Key	Function
	Changes to the DI/DO display screen (☞ This section 1).
	Changes to the function device screen (☞ This section 2).
	Changes to the ABS data screen (☞ This section 4).
	Changes to the unit composition list screen (☞ This section 5).
	Returns to the function selection menu screen.
	Exits the servo amplifier monitor.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following: ☞ 9.4.8 Hard copy output
	The touch operation of this key is invalid.

4 ABS data display screen

The following describes the display data of the ABS data display screen and the key functions displayed on the screen.

(1) Displayed contents



No.	Item	Description
1)	Absolute position data	Displays the absolute position data in the absolute position detection system with the following items. <ul style="list-style-type: none"> • Motor edge pulse value • Command pulse value
2)	Encoder data	Displays the encoder data with the following items. <p>Current position</p> <ul style="list-style-type: none"> • Absolute encoder data • CYC (Motor edge pulse value) • CYC (Command pulse value) • Number of motor rotations ABS <p>Position at power loss</p> <ul style="list-style-type: none"> • Absolute encoder data • CYC0 (Motor edge pulse value) • CYC0 (Command pulse value) • Number of motor rotations ABS0

(2) Key functions

The table below shows the functions of the keys that are used for the operations of the ABS data display screen.

Key	Function
	Changes to the DI/DO display screen (☞ This section 1).
	Changes to the function device screen (☞ This section 2).
	Changes to the unit composition list screen (☞ This section 5).
	Changes to the amplifier information screen (☞ This section 3).
	Returns to the function selection menu screen.
	Exits the servo amplifier monitor.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following: ☞ 9.4.8 Hard copy output
	The touch operation of this key is invalid.

5 Unit composition list display screen

The following describes the display data of the unit composition list screen and the key functions displayed on the screen.

(1) Displayed contents

Slot	Type name	AxNo.	State	Motor model	S/W version
IFU					
Slot:1					
Slot:2					
Slot:3					
Slot:4					
Slot:5					
Slot:6					
Slot:7					
Slot:8					
Option					

No.	Item	Description
1)	Type name	Displays the model name of the drive unit (DRU), interface unit (IFU) and option unit installed in each slot.
2)	AxNo.	Displays the axis number of the drive unit (DRU) and interface unit (IFU).
3)	State	Displays status of the drive unit (DRU) and interface unit (IFU) and the alarm/warning number.
4)	Motor model	Displays the model name of the motor connected to the drive unit (DRU).
5)	S/W version	Displays the software number of the drive unit (DRU) and interface unit (IFU).

(2) Key functions

The table below shows the functions of the keys that are used for the operations of the unit composition list screen.

Key	Function
	Changes to the DI/DO display screen (☞ This section 1).
	Changes to the ABS data screen (☞ This section 4).
	Changes to the amplifier information screen (☞ This section 3).
	Changes to the function device screen (☞ This section 2).
	Returns to the function selection menu screen.
	Exits the servo amplifier monitor.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following: ☞ 9.4.8 Hard copy output
	The touch operation of this key is invalid.

9.4.6 Parameter setting

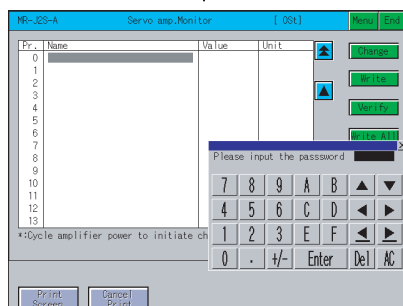
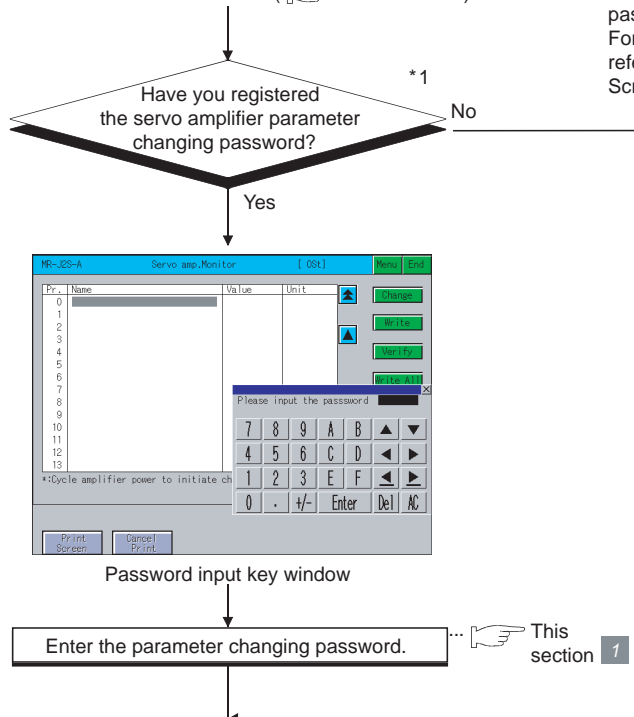
You can use the parameter setting function to set the servo parameters (basic parameters/expansion parameter 1, 2) of the connected servo amplifier.

The password input key window appears for accessing the parameter setting screen of the servo amplifier monitor when the password is set with GT Designer2.

The screen changes as follows after **Parameters** is selected on the function selection menu screen.

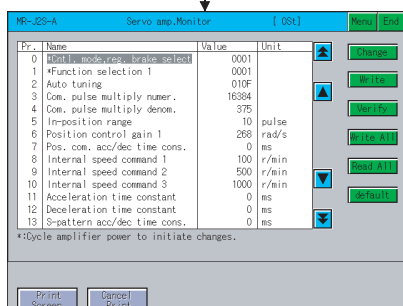


Function selection menu screen (Section 9.4.2)



Password input key window

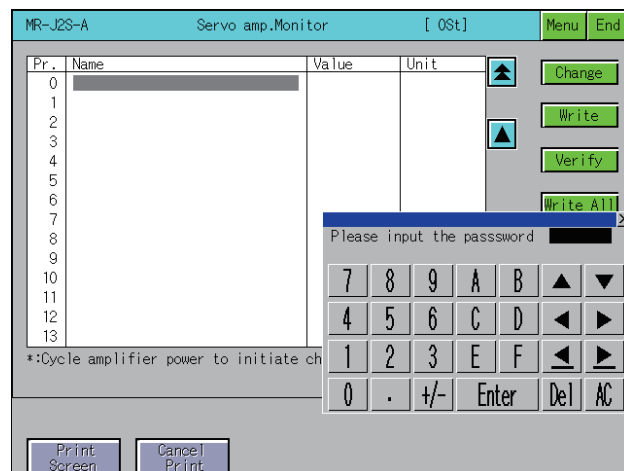
Enter the parameter changing password.



Parameter setting screen

1 Password input operation procedure

The following describes the procedure for inputting the password for changing the servo parameters.



(1) Functions

- If the input password matches, the parameter setting screen is displayed.
- If the input password does not match, an error message is displayed.
Touching returns to the function selection menu screen.
- Numerical numbers and letters A to F can be used for a password.

(2) Operations

(a) Inputting the password

Touch to and to to input the password.

After inputting the password, touch to set the password.

To edit the input characters, touch to delete the characters, and then input the new characters.

(b) Canceling password input

Touch to return to the monitor screen.

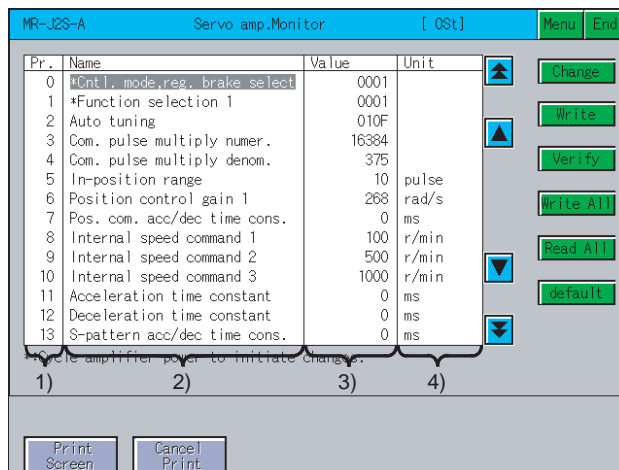
2 Parameter setting screen

The following describes the display data of the parameter setting screen and the key functions displayed on the screen.



Parameters with an asterisk (*) preceding the name become valid after the parameters are set and the power of the servo amplifier is turned off and then on again.









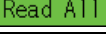




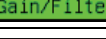







(1) Display screen



No.	Item	Description
1)	Pr.	Displays the parameter number.
2)	Name	Displays the parameter name.
3)	Value	Displays the present set value of the parameter.
4)	Unit	Displays the setting unit for each parameter.

(2) Key functions

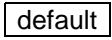
The table below shows the functions of the keys that are used with the operations on the parameter setting screen.

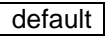
Key	Function
 	Selects the servo parameter setting item.
 	Displays the parameter items with scrolling a page up/down.
	Changes the servo parameter settings read to the GOT internal memory.
	Writes the servo parameter settings of the selected items to the servo amplifier.
	Matches all parameter values presently displayed on the GOT with the servo amplifier parameter values.
	Writes all parameter values presently displayed on the GOT to the parameters of the servo amplifier.
	Reads all parameter values from the servo amplifier to the GOT and displays those values.
	Returns all parameter values to their initial values.
 /  *1	Switches between the parameter display for the drive unit (DRU) and interface unit (IFU) each time this is touched.
 *1	Selects the slot number of the drive unit (DRU).
 *2	Changes the gain filter parameter.
 *2	Changes the extension setting parameter.
 *2	Changes the I/O setting parameter.
	Returns to the function selection menu screen.
	Exits the servo amplifier monitor.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following:  9.4.8 Hard copy output
	The touch operation of this key is invalid.

*1: This is displayed only when the MR-J2M A series is connected.

*2: This is displayed only when the MR-J3 series is connected.



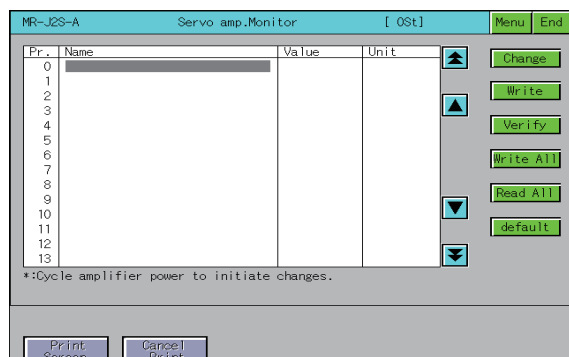
When  is executed for the MR-J3 series parameters

The operation when  is executed differs depending on the displayed parameter screen, as shown in (1) and (2) below.

- (1) When the basic setting, gain/filter or extension setting parameter screen is displayed:
The 000BH processing (reference/writing is possible only for basic setting, gain/filter and extension setting parameter) is performed.
- (2) When the I/O setting parameter screen is displayed:
The 000CH processing (reference/writing is possible for all parameters) is performed.

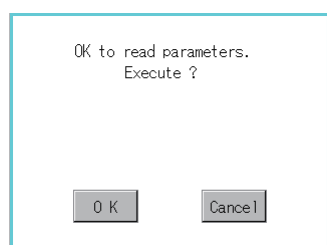
3 Parameter setting operation

The following describes the procedure of changing the setting of the "Auto tuning" item as an example of the parameter setting operation.



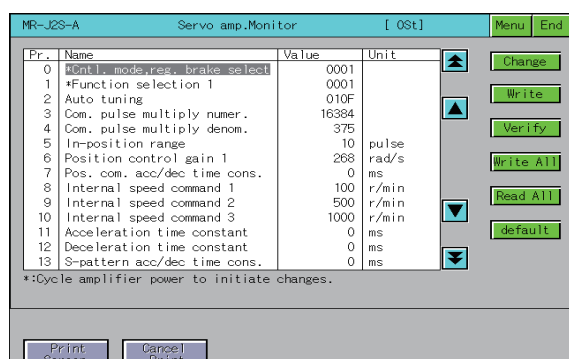
- 1 Touch the **Read All** key.

The parameter values within the servo amplifier are displayed on the screen.



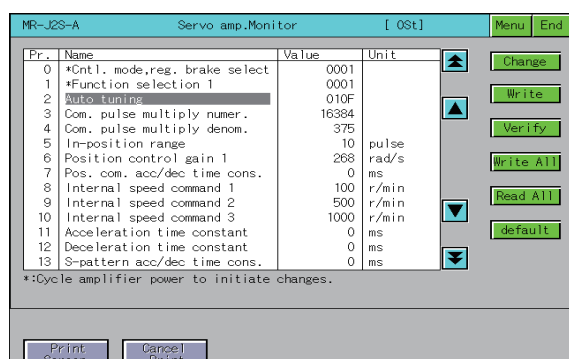
- 2 The parameter read confirmation window is displayed.

Touch the **OK** key to read the parameter values within the servo amplifier to the GOT.



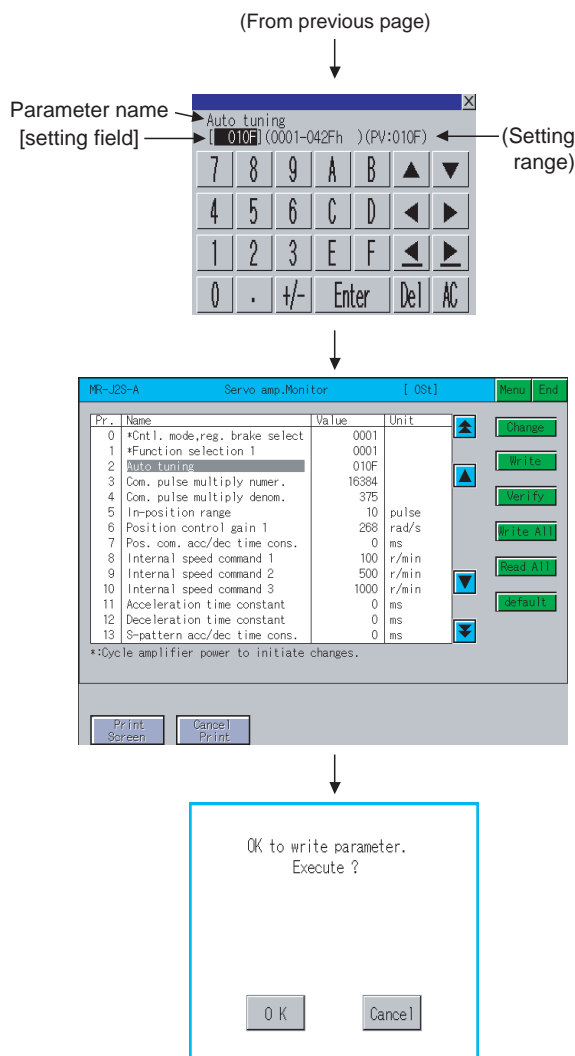
- 3 The read parameter values within the servo amplifier are displayed on the screen.

Parameters that cannot be written or read are not displayed on the parameter setting screen.



- 4 Select the item whose parameter is to be set with the **▲** or **▼** key, and touch the **Change** key.

(To next page)



- 5 As the parameter setting window appears, enter the parameter setting with alphanumeric keys, and touch **Enter** to confirm the setting. To cancel the parameter setting operation, touch **X** to close the parameter setting window.
- 6 The parameter setting is changed on the parameter setting screen. Select the changed parameter item, and touch the **Write** key. If there are multiple parameter items with changed settings, touch the **Write All** key to write all parameter items with changed settings.
- 7 A confirmation window appears. Touch the **OK** key to write the parameter setting(s) to the servo amplifier. To cancel writing of the parameter setting(s), touch **Cancel** key. This completes the writing operation of the parameter setting.

Point

- (1) The changes to the parameter setting are written to the E2PROM of the servo amplifier. Consequently, the written parameter setting is retained even if the power of the amplifier is off.
- (2) If the following parameter settings are changed on the servo amplifier, be sure to also change the settings on the GOT setup screen (☞ 9.4.2) in the same way.
If the settings on the setup screen and the servo amplifier do not match, normal communications with the servo amplifier may not be performed.
 - Station number setting
 - IFU station number setting

9.4.7 Test operations

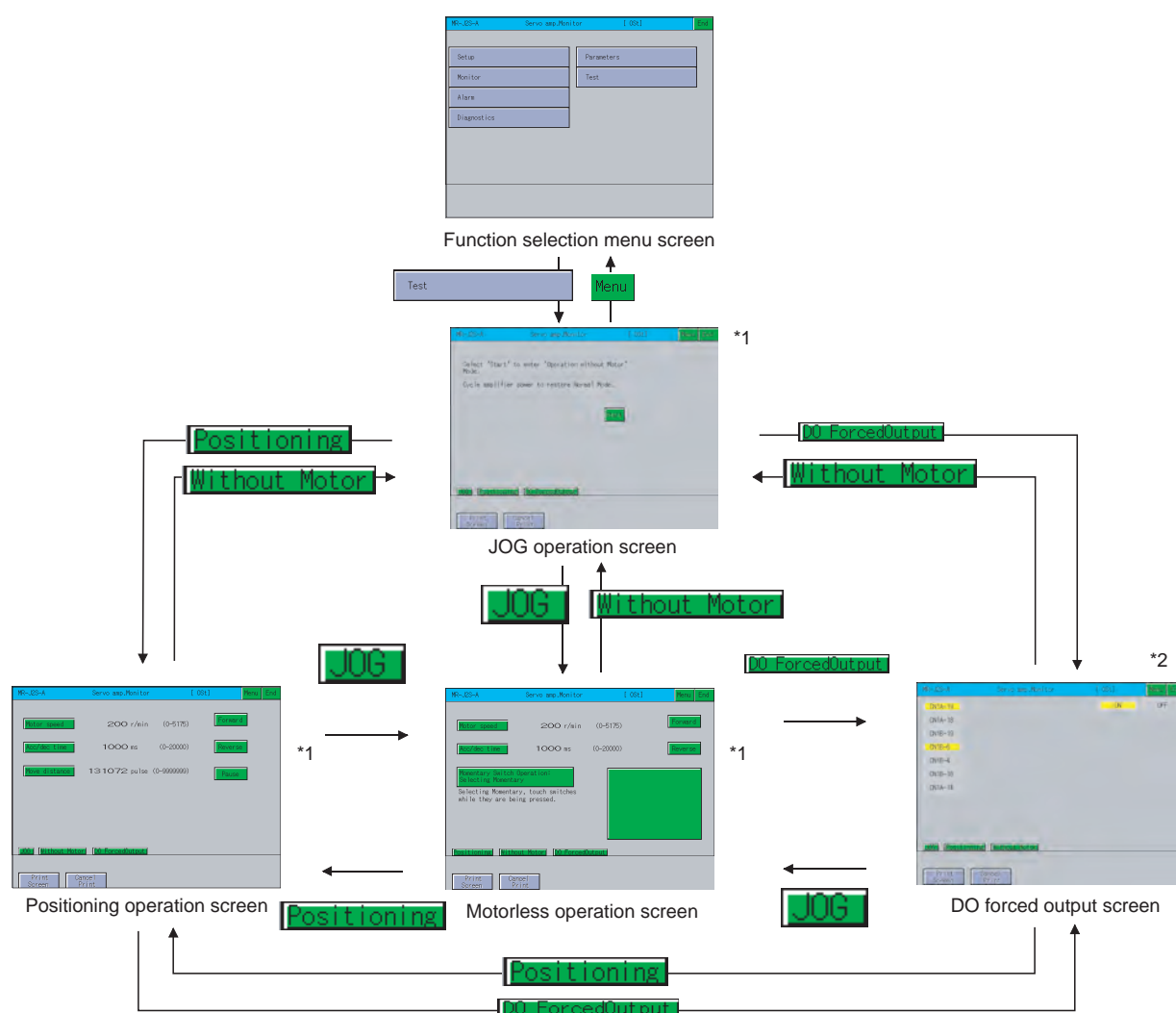
This function performs the following test operations on the connected servo amplifier.

- JOG operation : The servo motor rotates while the Forward or Reverse key is touched. (☞ This section 3)
- Positioning operation : This operation starts when the Forward or Reverse key is touched, and the servo motor rotates by the preset distance. (☞ This section 4)
- Motor-less operation : Simulates the motion of the servo motor within the servo amplifier even when the servo motor is not connected. (☞ This section 5)
- DO forced output : Forcibly turns the output signals ON/OFF regardless of the output conditions of the servo amplifier output signals. (☞ This section 6)

(1) Changing screens

The screen changes as follows after **Test** is selected on the function selection menu screen. Depending on the model of the connected servo amplifier, some screens may not be displayed. Refer to the following for the screens that cannot be displayed.

☞ 9.2.1 4 List of servo amplifier types that can be monitored and functions



*1 Not displayed for MR-J2M-P8A monitor
*2 Not displayed for MR-J2M-□DU monitor



If the JOG operation screen data has not been downloaded to the GOT, "Monitor data not found" is displayed and the subsequent screens are not displayed.

1 Precautions for test operations

The following describes the precautions when performing a test operation of the servo amplifier monitor.



DANGER

- Do not operate the servo amplifier switches with wet hands. Doing so can cause an electric shock.
- Do not perform operations with the front cover of the servo amplifier removed. Doing so can cause an electric shock since the high-voltage terminals and live parts are exposed.
- Do not open the front cover of the servo amplifier when the power is on or during operation. Doing so can cause an electric shock.



CAUTION

- Be sure to read the precautions for test operation in the manuals of the servo amplifier before performing a test operation.
- Check parameters of the servo amplifier before starting operation. Unexpected operations may occur depending on the machine.
- The heat sink, regenerative brake resistor, servo motor and other parts of the servo amplifier may be hot while the power is on or for a period after the power is turned off; therefore, do not touch or bring parts (cables etc.) close to them. Doing so can cause fire or damage to the parts.

(1) Servo on

For test operation of JOG operation/positioning operation, the SON digital input signal of the servo amplifier is turned on automatically in the servo amplifier to start operation, regardless of the ON/OFF status of the SON signal of the digital I/O signal of the servo amplifier.

In addition, the servo amplifier does not accept any external command pulses and input signals (excluding emergency stop) until the test operation screen is exited.

The SON automatically turns on when touching the **Forward** or **Reverse** key on the JOG operation screen or positioning operation screen of the servo amplifier monitor.

(2) Stop



To perform an emergency stop, turn off the emergency stop signal of the servo amplifier or turn off the input power.

(a) Use the following procedure to stop test operation from the servo amplifier monitor.

- JOG operation: Release the **Forward** or **Reverse** key.
- Positioning operation: Touch the **Pause** key.

(b) The servo motor stops if any of the following states occurs during test operation.

- The communication cable is disconnected.
- The screen is switched to another servo amplifier monitor screen or the servo amplifier monitor is exited.

However, during motor-less operation, the test mode is not canceled until the servo amplifier is powered off.

2 Preparations for test operations

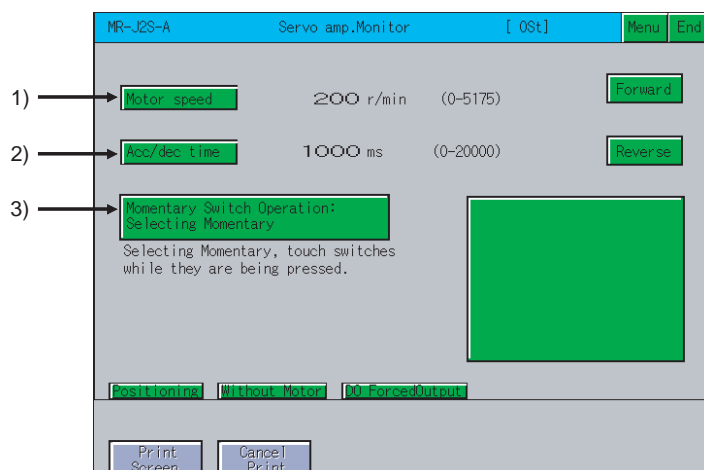
When performing test operations, it is necessary to make the test operation settings on the connected servo amplifier.

Refer to the manual of the connected servo amplifier for details of making settings on the servo amplifier to perform test operations.

3 JOG operation screen

This section describes the display data of the JOG operation screen and the key functions displayed on the screen.

(1) Displayed contents



No.	Item	Description
1)	Motor speed	Displays the set speed of the servo motor.
2)	Acc/dec time	Displays the set acceleration/deceleration time constant.
3)	Momentary Switch Operation	Displays how to operate the JOG operation.

(2) Operation

(a) When selecting **Momentary Switch Operation: Selecting Momentary**












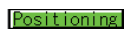


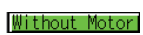










- Start operation
Touch the **Forward** or **Reverse** key.
- Stop operation
Release the **Forward** or **Reverse** key.

(b) When selecting **Momentary Switch Operation: Not Selecting Momentary**

- Start operation
Touch the **Forward** or **Reverse** key.
- Stop operation
Touch the **Pause** key.

(3) Key functions

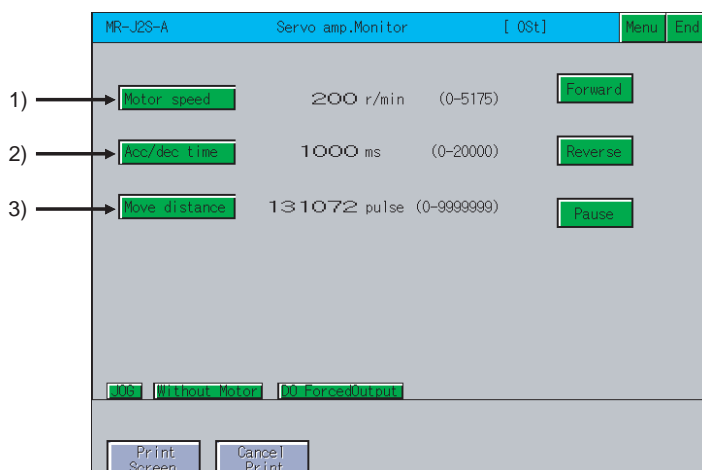
The table below shows the functions of the keys that are used for the operations of the JOG operation screen.

Key	Function
	Runs the servo motor in the forward rotation (CCW) direction.
	Runs the servo motor in the reverse rotation (CW) direction.
	Changes the speed of the servo motor.
	Changes the acceleration/deceleration time constant.
 	<p>Touching this changes the operation mode (momentary operation/no momentary operation).</p> <p>Momentary Switch Operation: Selecting Momentary</p> <p>The servo motor rotates while the  or  key is touched. (Releasing your finger from these keys stops the operation.)</p> <p>Momentary Switch Operation: Not Selecting Momentary</p> <p>The servo motor rotates while the  or  key is touched, stops when the  key is touched.</p>
	Changes to the positioning operation screen ( This section ).
	Changes to the motor-less operation screen ( This section ).
	Changes to the DO forced output screen ( This section ).
	Returns to the function selection menu screen.
	Exits the servo amplifier monitor.
	<p>Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer.</p> <p>For further information about hard copies, refer to the following:</p> <p> 9.4.8 Hard copy output</p>
	The touch operation of this key is invalid.

4 Positioning operation screen

The following describes the display data of the positioning operation screen and the key functions displayed on the screen.

(1) Displayed contents



No.	Item	Description
1)	Motor speed	Displays the set speed of the servo motor.
2)	Acc/dec time	Displays the set acceleration/deceleration time constant.
3)	Move distance	Displays the set distance.

(2) Operation

(a) For MR-J2-Super series and MR-J2M series

• Start operation

Touch the **Forward** or **Reverse** key.

To resume operation that has been paused, touch the **Forward** key to resume forward rotation or the **Reverse** key to resume reverse rotation.

• Stop operation

When the set distance has been reached, operation stops.

Touching the **Pause** key pauses the operation.

If touch the **Pause** key again after the operation is paused, the remaining distance is erased.

(b) For MR-J3 series

• Start operation

Touch the **Forward** or **Reverse** key.

To resume the operation that has been paused, touch the **Restart** key to resume the rotation.






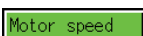

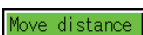








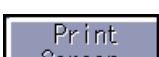

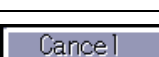
• Stop operation

When the set distance has been reached, operation stops.

Touching the **Pause** key pauses the operation. If touch the **Clear** key again after the operation is paused, the remaining distance is erased.

(3) Key functions

The table below shows the functions of the keys that are used for the operations of the positioning operation screen.

Key	Function
	Runs the servo motor in the forward rotation (CCW) direction.
	Runs the servo motor in the reverse rotation (CW) direction.
 *1	Stops the rotation of the servo motor temporarily.
 *2	Resumes the rotation of the paused servo motor.
 *2	Deletes the remaining distance of the paused servo motor.
	Changes the rotation speed of the servo motor.
	Changes the acceleration/deceleration time constant.
	Changes the distance.
	Changes to the JOG operation screen ( This section 3).
	Changes to the motor-less operation screen ( This section 5).
	Changes to the DO forced output screen ( This section 6).
	Returns to the function selection menu screen.
	Exits the servo amplifier monitor.
	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following:  9.4.8 Hard copy output
	The touch operation of this key is invalid.

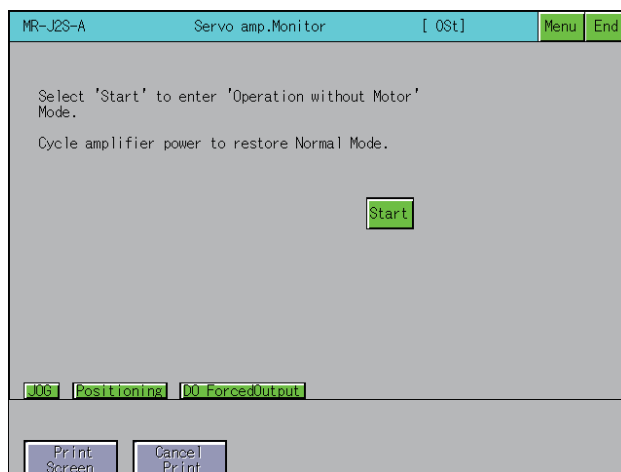
*1: This is displayed only when the MR-J2-Super series or MR-J2M series is connected.

*2: This is displayed only when the MR-J3 series is connected.

5 Motor-less operation screen

The following describes the display data of the motor-less operation screen and the key functions displayed on the screen.

(1) Displayed contents



(2) Operation

- Start operation

Touch the **Start** key.

- Stop operation

To cancel the motor-less operation, turn the power of the servo amplifier off.

(3) Key functions

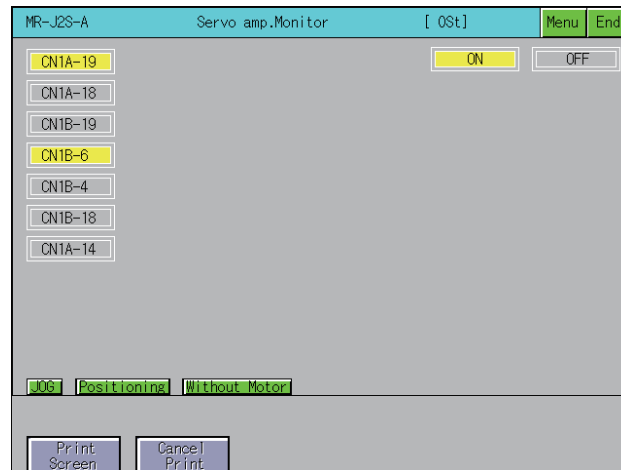
The table below shows the functions of the keys that are used for the operations of the motor-less operation screen.

Key	Function
Start	Starts motor-less operation.
JOG	Changes to the JOG operation screen (☞ This section 3).
Positioning	Changes to the positioning operation screen (☞ This section 4).
DO ForcedOutput	Changes to the DO forced output screen (☞ This section 5).
Menu	Returns to the function selection menu screen.
End	Exits the servo amplifier monitor.
Print Screen	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following: ☞ 9.4.8 Hard copy output
Cancel Print	The touch operation of this key is invalid.

6 DO forced output screen

The following describes the display data of the DO forced output screen and the key functions displayed on the screen.

(1) Displayed contents



No.	Item	Description
1)	ON/OFF status of output signals	Displays the ON/OFF status of the servo amplifier output signals. <ul style="list-style-type: none"> After this screen has been switched to another screen, all external I/O signals are turned off.

(2) Operation

When the name of an output signal is touched, the ON/OFF status of that signal is inverted and written to the servo amplifier.

(3) Key functions

The table below shows the functions of the keys used for the operations of the DO forced output screen.

Key	Function
CN1A-19 (Output signal name)	Touching the signal name of an output signal sets or resets the status for that signal. <ul style="list-style-type: none"> If the present output signal is ON, then the signal is turned off (RESET). If it is OFF, then it is turned on (SET).
D01 ^{*1}	Displays the external output signals of the extension I/O unit.
JOG	Changes to the JOG operation screen (☞ This section 3).
Positioning	Changes to the positioning operation screen (☞ This section 4).
Without Motor	Changes to the motor-less operation screen (☞ This section 5).
Menu	Returns to the function selection menu screen.
End	Exits the servo amplifier monitor.
Print Screen	Stores the displayed screen to the memory card in BMP/JPEG file format or prints it with a printer. For further information about hard copies, refer to the following: ☞ 9.4.8 Hard copy output
Cancel Print	The touch operation of this key is invalid.

*1: This is displayed only when the MR-J2M-P8A is connected.

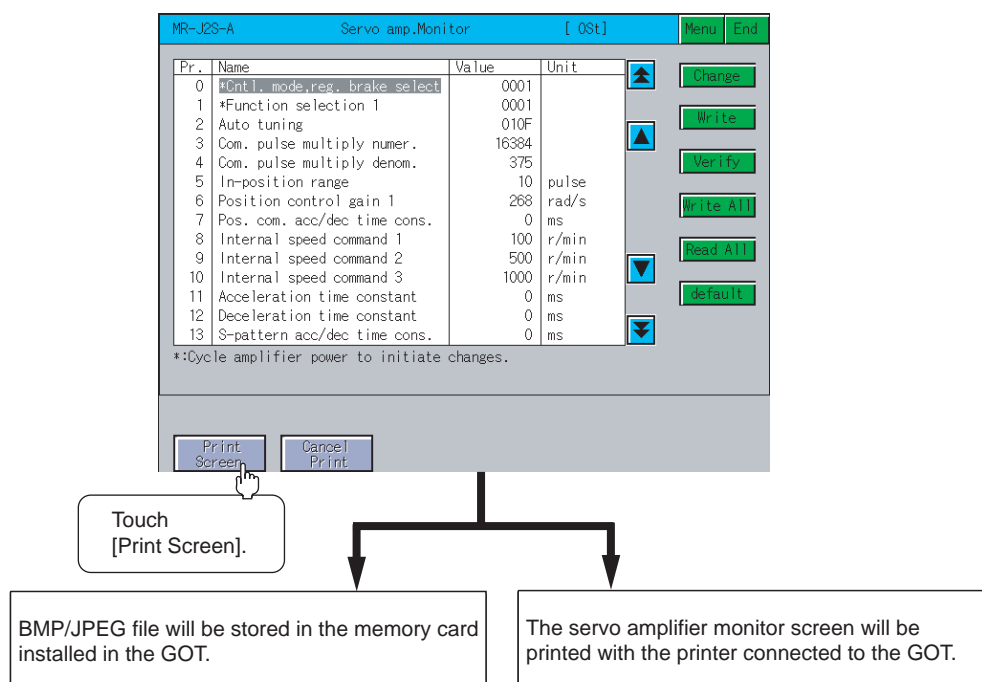
9.4.8 Hard copy output

This section describes how to store a screen to the memory card in BMP/JPEG file format or print it with a printer when executing the amplifier monitor.

Hard copy methods differ depending on the GOT to be used.

(1) GOT with VGA or higher resolution

Hard copy output operations are performed by touching the "Print Screen" or "Cancel Print" key displayed on the screen.



(2) GOT with QVGA resolution

Hard copy output operations are performed by turning ON/OFF the start or abort trigger device that has been set in the GT Designer2.



- Install the extended function OS (Printer) to the GOT when printing a servo amplifier monitor screen.
- The output target (CF card/printer) of hard copy can be set in [Hard Copy] of GT Designer2.

For details of the hard copy setting, refer to the following.

- ➡ GT16 User's Manual (Chapter 13 DATA CONTROL)
GT15 User's Manual (Chapter 13 FILE DISPLAY AND COPY)
- ➡ GT Designer2 Version□ Screen Design Manual (Section 13.2 Hard Copy)

9.5 Error Messages and Corrective Action

This section describes the error messages that may be displayed during servo amplifier monitor operation and their corrective action.

Error message	Error definition	Corrective action
Monitor data not found	The monitor data have not installed or have been deleted.	Download the monitor data of the servo amplifier monitor.
It is not possible to set.	An item that cannot be set was selected.	Select an item that can be set.
No AMP Communications	Communication can not be established with the servo amplifier set as the monitor destination.	<ul style="list-style-type: none"> • Check the connection state between the servo amplifier and the GOT (connector disconnection, cable wire break). • Check if an error has occurred in the servo amplifier. • Set the same values to the setup screen on the servo amplifier monitor and the parameter setting on the servo amplifier.
This test mode cannot be selected. Operation without Motor rotation.	Another test operation function has started.	Exit the other test operation function.
SON Make sure that operation is at a stop.	The servo amplifier SON signal is ON.	Turn off the servo amplifier SON signal.
Incorrect setting range	A value outside the setting range was set when setting the servo parameter of the servo amplifier.	Set the servo parameter of the servo amplifier within the setting range.
Servo alarm has occurred. Alarm:**	An alarm occurred on the connected servo amplifier.	Reset the alarm on the servo amplifier.
Unit not found	The drive unit is not installed in the selected slot.	Select the slot where the drive unit is installed.
Unmatched password	The password that was input as the password for changing the servo amplifier parameter is incorrect.	Input the correct password.
Can't write to servo amp. Normally.	Failed to write the parameter.	Check the write data. Check the setup information.
Please confirm forward or reversal stroke end (LSP or LSN)	The servo amplifier LSP/LSN signal is OFF.	Turn on the servo amplifier LSP/LSN signal.
Communication channel setup error	The channel No. setting or communication driver setting is incorrect.	Check the communication settings.
It is not possible to select.	<ul style="list-style-type: none"> • MR-J2M-P8A or MR-J3-A was selected with the station No. selection setting set to [No]. • A channel with no station number was selected for the MR-J2M-P8A. 	<ul style="list-style-type: none"> • Set the station No. selection setting to [Yes]. • Select a channel with a station number.

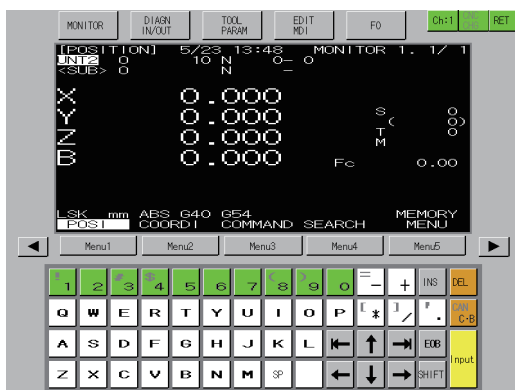
10. CNC MONITOR FUNCTIONS



10.1 Features

Functions, such as Position Display Monitor, Alarm Diagnosis Monitor, Tool Offset/Param, Program Monitor and APLC Release Screen, equivalent to the MELDAS dedicated display are available for the MELDAS connected to the GOT.

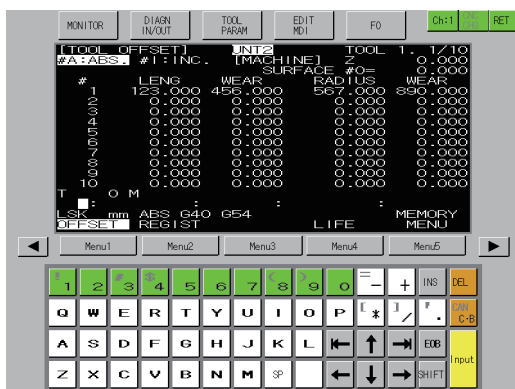
Position Display Monitor



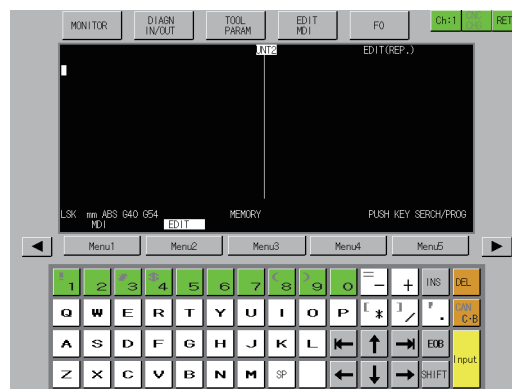
Alarm Diagnosis Monitor



Tool Offset Monitor



Program Monitor



APLC function



10.2 Specifications

10.2.1 System configuration

This section describes the target CNC of the CNC monitor and the connection type between the GOT and CNC.

For connection type settings and precautions regarding the communication unit/cable and connection type, refer to the following manual.

 GOT1000 Series Connection Manual

1 Target CNC of the CNC monitor

CNC
C70, C6/C64

2 Connection type

(○: Available, ×: Unavailable)

Function		Connection type between GOT and CNC						
Name	Details	Bus connection	Direct connection	Computer link connection	Ethernet connection	MELSEC NET/10 connection	CC-Link connection	
							ID ^{*1}	G4 ^{*2}
CNC monitor	Monitors the CNC (C70, C6/C64) and changes the parameters	○ ^{*3}	×	×	○	○ ^{*4}	×	×

*1 Indicates CC-Link connection (Intelligent device station).

*2 Indicates CC-Link connection (via G4).

*3 Applicable to the CNC C70 only

*4 Applicable to the CNC C6/C64 only

3 Required option OS and option function board

The option function OS and option function board shown below are required.

Option OS	OS memory space (user area)			Option function board	
	GT16		GT15	GT16	GT15
	Built-in flash memory (ROM)	User memory (RAM)			
CNC monitor	390KB	770KB	588KB	Not required	GT15-FNB, GT15-QFNB16M, GT15-QFNB48M, GT15-QFNB, GT15-QFNB32M, GT15-MESB48M

(1) Option OS

Install the option OS in the above table to the GOT.

Refer to the following manual for the procedure for installing the option OS.

 GT Designer2 Version □ Basic Operation/Data Transfer Manual (8. TRANSFERRING DATA)

(2) OS memory space

The available memory space shown in the table above is required in the user area to install the option OS to the GOT.

Refer to the following manual for the procedure for checking the available memory space of the user area and information about the data using other user areas.

 GT Designer2 Version □ Basic Operation/Data Transfer Manual (8. TRANSFERRING DATA)

(3) Option function board


(a) For GT16

No option function board is required.


(b) For GT15

Mount one of the option function boards in the above table on the GOT.

For the GOTs with a built-in option function board, refer to the following.

 1.1.2 Hardware and OS' required for each function

For how to mount an option function board on the GOT, refer to the following manual.

 GT15 User's Manual (8.10 Option Function Board)

4 CNC functions that can be monitored

The CNC monitor function allows the following functions to be monitored.

For details of each function, refer to the manual for each CNC.

Item	Description	CNC C70	MELDAS C6/C64
Position Display Monitor	Position	○	○
	Coordinate	○	○
	Command	○	○
	Program search	○	○
	PLC switch	×	○
	Common variable	○	○
	Local variable	○	○
Alarm Diagnosis Monitor	Alarm message	○	○
	Servo monitor	○	○
	Spindle monitor	○	○
	PLC interface diagnosis	○	○
	Absolute position monitor	○	○
	Adjustment	×	○
	NC data sampling	○	×
	Operation history	○	○
	Configuration	○	○
	Data input	×	○
	Data output	×	○
	Program erase	○	○
	Program file	○	○
	Program copy	○	○
	Flash ATA card I/F	×	○
	Auxiliary axis parameter	×	○
	Auxiliary axis monitor	×	○
Tool Offset/Param	Wear data (L system)	○	○
	Tool length data (L system)	○	○
	Tool nose data (L system)	○	○
	Tool life management (L system)	○	○
	Tool offset (L/M system)	○	○
	Tool registration (L system)	○	○
	Workpiece coordinate	○	○
	Machining parameter	○	○
	I/O parameter	×	○
	Other parameters	○	○
Program Monitor	MDI editing	○	○
APLC Release Screen	APLC Release Screen	○	○

10.2.2 Access range

- (1) Bus connection
One GOT can monitor up to two CNCs by switching the CNCs.
Up to five GOTs can simultaneously monitor one CNC.
- (2) Ethernet connection
One GOT can monitor up to 64 CNCs by switching the CNCs.
Up to eight GOTs can simultaneously monitor one CNC.
- (3) MELSECNET/10 connection
GOT monitors the control station only.

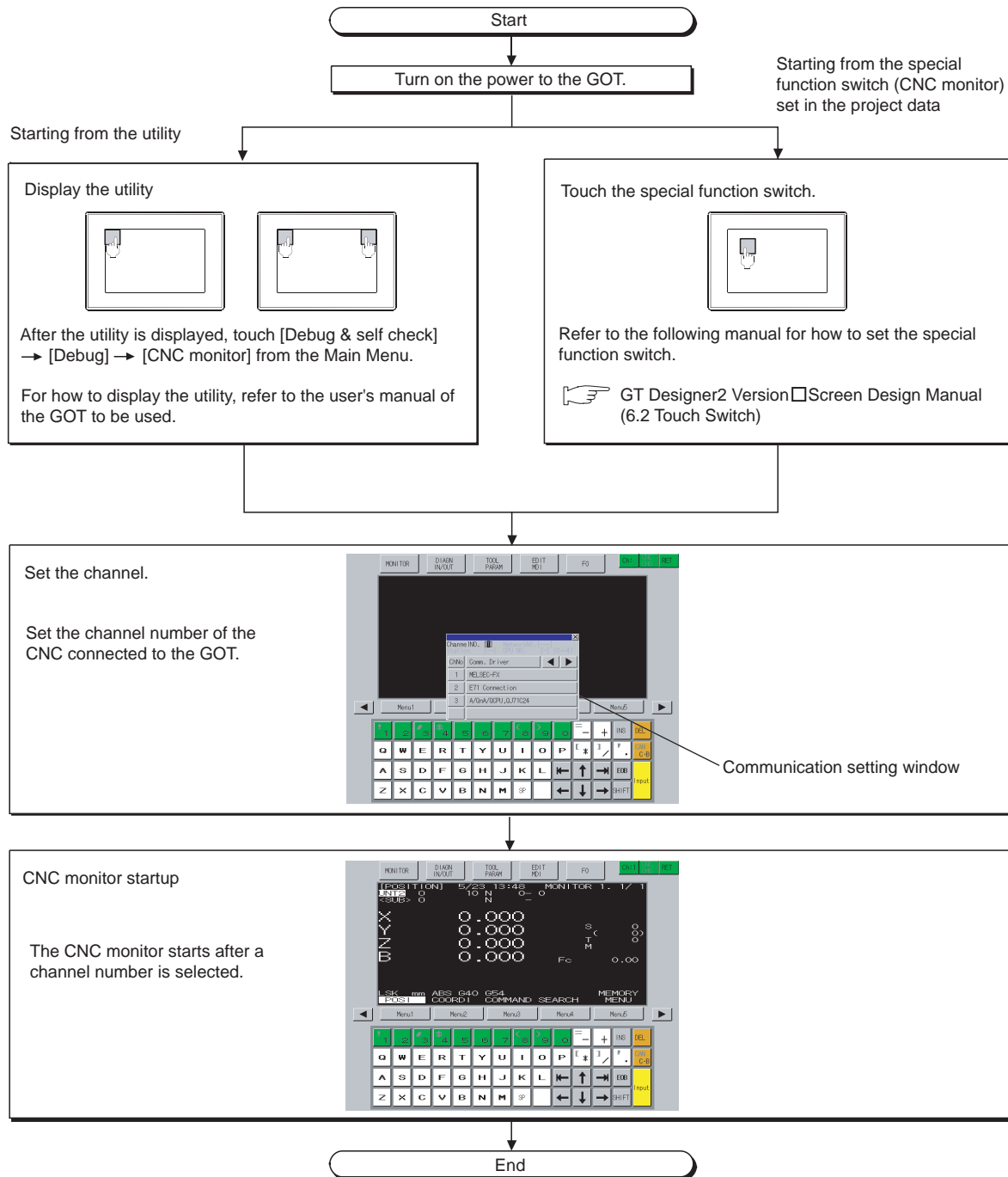
10.2.3 Precautions

- (1) Before using the CNC monitor
Read the manual of the connected CNC carefully and make sure you understand the contents before using the CNC monitor function.
- (2) GOT to be used
The CNC monitor cannot be used with the GT1575-V, GT1575-VN, GT1572-VN, GT156□, and GT155□.
- (3) Usable CNC
The CNC monitor is applicable to the CNC C70 and MELDAS C6/C64.
 - (a) CNC C70
Use the CNC C70 with the system software version of BND-1006W000-A0 or later.
 - (b) MELDAS C6/64
Use the MELDAS C6/C64 with the system software version of BND-377W010-D0 or later.

10.3 Display

1 Display operations

This section describes the flow until the operation screen of the CNC monitor is displayed after the CNC monitor (Option OS) is installed in the GOT.





- (1) How to display the utility
For how to display the utility, refer to the following.

GT16 User's manual (8.3 Utility Display)
GT15 User's manual (9.3 Utility Display)

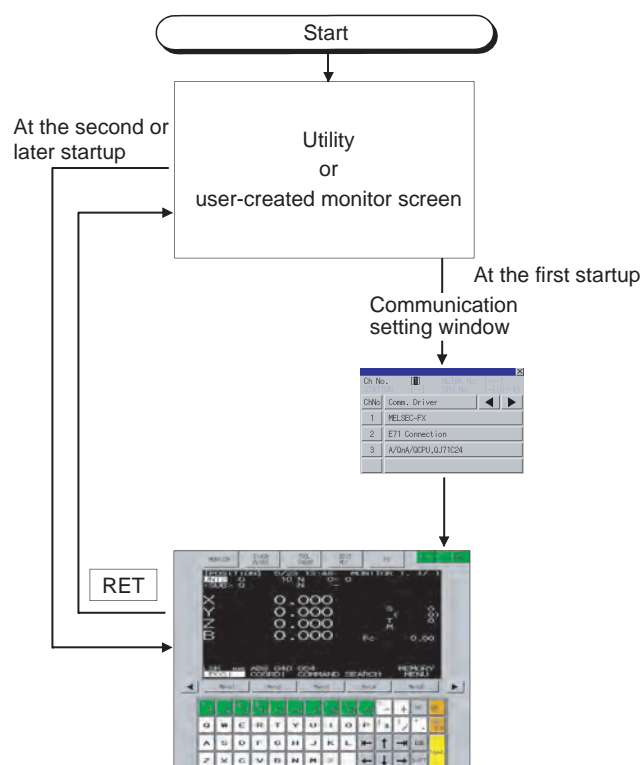
- (2) Communication setting window display
The communication setting window is displayed only at initial startup of the CNC monitor after turning on the GOT power.
To display the communication setting window at startup from the second time or after, touch the **Ch:** button on the CNC monitor screen.

10.4 Operation Procedures)

- (3) If the project data has not been downloaded
The CNC monitor can be started from the utility even if the project data has not been downloaded to the GOT.

2 Changing screens

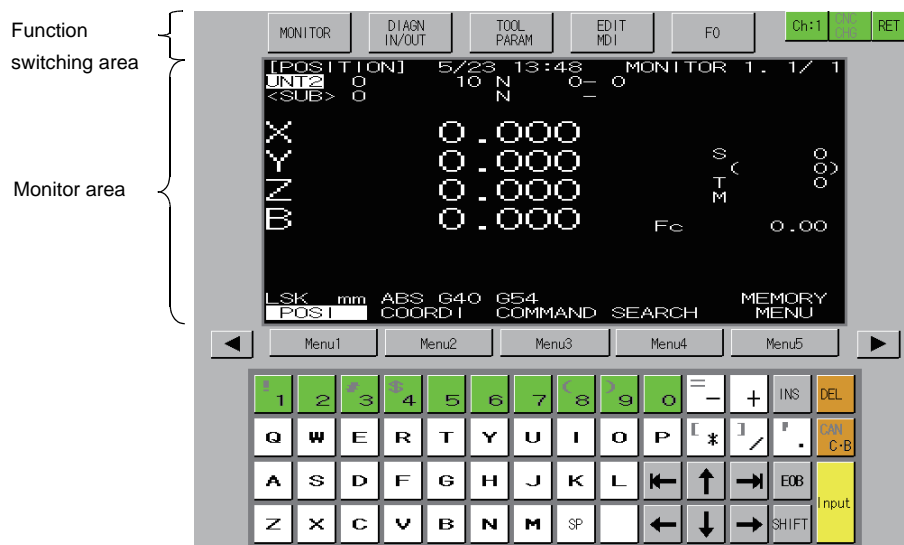
This section describes how to change the screen.



When exiting the CNC monitor function by touching **RET**, the last exited screen will be displayed when the CNC monitor function is started next time.


















10.4 Operation Procedures

This section describes the display data of the CNC monitor screen and the key functions displayed on the screen.



Item	Display data
Function switching area	Selects the function to be displayed and CNC monitor termination.
	Switches the monitor area to position display monitor.
	Switches the monitor area to alarm diagnosis monitor.
	Switches the monitor area to tool compensation parameter.
	Switches the monitor area to program monitor.
	Switches the monitor area to the APLC screen. If the monitored CNC unit does not include the APLC release function, the screen turns blank (nothing is displayed). (In this case, use a function switching key to switch the monitor to another function.)
	Displays the communication setting window.
	<ul style="list-style-type: none"> For bus connection The button does not function. (Specify the monitoring target in the communication setting window.) For Ethernet connection Switches the monitor among the CNC units when connected to multiple CNC units. The MELDAS C6/C64 units are switched in the order set in the Ethernet setting of GT Designer2. For MELSECNET/10 connection Cannot be operated because only control station can be monitored (switching not required).
	Terminates the CNC monitor function and returns to a monitor screen or the utility of the GOT.
Monitor area	Functions, such as Position Display Monitor, Alarm Diagnosis Monitor, Tool Offset/Param and Program Monitor, equivalent to the MELDAS dedicated display are available. The graphic and ladder editor functions are not available.
 to 	Switches to the monitor that corresponds to the items in the menu area. In the case of the above screen, the menu items are as follows. <div style="display: flex; justify-content: space-around; align-items: center;"> <div> : Relative value : Local variable </div> <div> : PLC switch : Menu switching </div> <div> : Common editing </div> </div> When the MELDAS dedicated display is valid, the "Other display operating" message and "Key operation right" menu are displayed. Select the "Key operation right" menu when operating keys on the GOT.

(Continued to next page)

Item	Display data
	Switches to the previous page when there are multiple pages displayed on the screen.
	Switches to the next page when there are multiple pages displayed on the screen.
Keyboard	Sets data to the monitor area.
Alphanumeric/symbol key	Enters alphabets (upper case only), numerals, spaces or symbols. The grayed symbol can be entered after the  key is touched.
   	Moves the cursor up, down, left or right. (Repeat function is available)
 	Moves the cursor to the previous or subsequent block. (Repeat function is available)
	Deletes one character at the cursor position.
	Switches the Insert mode.
	Deletes one block while editing machining program. After touching the  key, touch the  key to delete all blocks being displayed on the screen.
	Enters EOB(;) into the machining program.
	Determines the entry.
	Switches the key function.

10.5 Error Messages and Corrective Action

This section describes the error messages that may be displayed during CNC monitor operation and their corrective action.

If two or more of the following errors have occurred, the error with the higher priority is displayed.

Priority	Error message	Error definition	Corrective action
<div>Higher</div> <div>↑</div> <div>↓</div> <div>Lower</div>	Support communication driver is not installed. (CNC MONITOR)	The compatible communication driver is not installed in the GOT.	Install the compatible communication driver in the GOT. Bus connection: Bus(Q) Ethernet connection: QJ71E71/AJ71(Q)E71, Q17nNC MELSECNET/10 connection: MELSECNET/10
	The IP address of CNC to monitor is not set up. (CNC MONITOR)	The IP address of the CNC has not been set.	After setting the IP address of the CNC to be monitored in the Ethernet setting of GT Designer2, download the project data to the GOT.
	Communication channel setup error	There is no channel for communication.	Check that the channel No. is correctly set in the communication settings.

11. BACKUP/RESTORE



11.1 Features

Setting data, including a sequence program, parameters, and setting values, for a controller connected to the GOT can be saved (backed up) in a CF card or USB memory in the GOT. The saved data can be restored to the controller if required. The following shows features of the backup/restore function.

Remark

GOT backup

The backup/restore function is applicable to controllers connected to the GOT. For backing up the GOT setting data, use the GOT data package acquisition function.

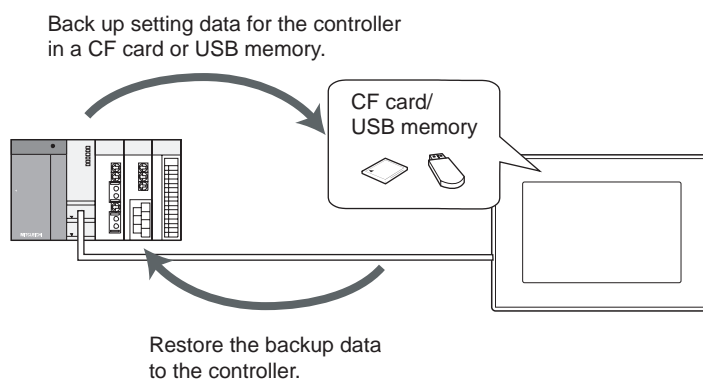
For the GOT data package acquisition function, refer to the following manual.

➞ GT16 User's Manual (Chapter13 DATA CONTROL)
GT15 User's Manual (Chapter13 FILE DISPLAY AND COPY)

1 Backing up or restoring system without personal computer for reducing downtime

Setting data for a controller connected to the GOT can be backed up, and the data can be restored to the controller.

With backing up setting data for a controller, the data can be restored to the controller with the GOT connected to the controller even though the controller has to be replaced because of problems, including failures. As a result, the system can be easily restored.

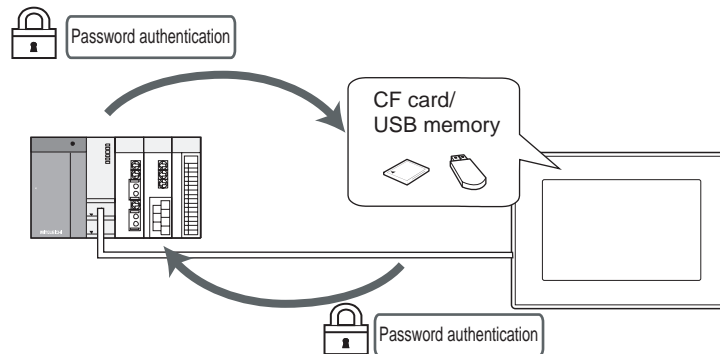


2 Enabling creating the same system without personal computer

With restoring the backed up setting data to controllers in other systems, the same system can be created without a personal computer.

3 Improving security

When the backup/restore function is used, browsing and changing setting data is limited with a password and the security is improved.

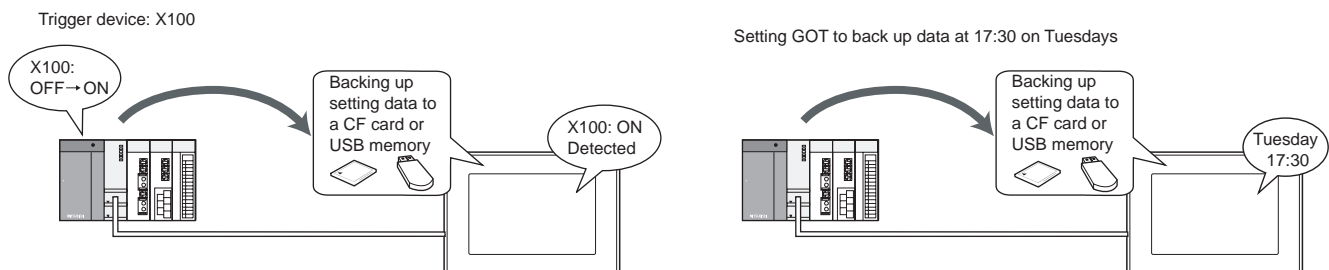


4 Automatically backing up data with trigger

By setting the trigger device or the days and time, the GOT can automatically back up setting data for controllers.

By controlling the backup with the set trigger device, the GOT can automatically back up setting data for controllers after the data are changed.

By setting the days and time, the GOT can back up setting data for controllers periodically.



11.2 Specifications

11.2.1 System configuration

This section describes the system configuration for the backup/restore function.

For connection type settings, and precautions on the communication unit/cable and connection type, refer to the following manual.

 GOT1000 Series Connection Manual

1 Target controller

Controller	
Q series ^{*1*2}	QCPU (Q mode)
CNC C70	CNC C70
Motion controller CPU ^{*3*4}	Q172CPU, Q173CPU, Q172CPUN, Q173CPUN, Q172HCPU, Q173HCPU, Q172DCPU, Q173DCPU

*1 Use a PLC CPU with the function version of B or later.

*2 The backup/restore function cannot be used with the redundant CPU.

*3 Use the following production number motion controller CPU when using the Q172CPU or Q173CPU.

• For bus connection and direct CPU connection

Q172CPU: Production number K***** or later

Q173CPU: Production number J***** or later

• For connections other than bus connection and direct CPU connection

Q172CPU: Production number N***** or later

Q173CPU: Production number M***** or later

*4 The operation system software of SV13 and SV22 are available only.

Use a motion controller CPU with the following OS installed when using the Q172CPU, Q173CPU, Q172CPUN, or Q173CPUN.

• SW6RN-SV13Q□:00H or later (00E or later for using the Q172CPU or Q173CPU with the bus connection or direct CPU connection)

• SW6RN-SV22Q□:00H or later (00E or later for using the Q172CPU or Q173CPU with the bus connection or direct CPU connection)

2 Connection type

(○: Applicable, △: Partly restricted, ×: Inapplicable)

Function		Connection type between GOT and controller						
Name	Description	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	MELSECNET/H connection, MELSECNET/10 connection	CC-Link connection	
							ID ^{*1}	G4 ^{*2}
Backup/restore	Backs up setting data for a controller connected to the GOT and restores the data to the controller.	○	○	○	○	×	×	×

*1 Indicates CC-Link connection (Intelligent device station).

*2 Indicates CC-Link connection (via G4).

3 Required extended function OS


The following extended function OS is required.

Extended function OS	OS memory space (user area)			Option function board
	GT16		GT15	
	Built-in flash memory (ROM)	User memory (RAM)		
Backup/Restore	420KB	766KB	820KB	Not required

(1) Extended function OS

Install the extended function OS shown in the above table on the GOT.


For how to install the OS, refer to the following manual.

 GT Designer2 Version □ Basic Operation/Data Transfer Manual (Chapter 8. TRANSFERRING DATA)

(2) OS memory space

For installing the extended function OS, the available space shown in the above table is required in the user area.

For checking the available space in the user area and the data that uses other user areas, refer to the following manual.

 GT Designer2 Version □ Basic Operation/Data Transfer Manual (Chapter 8. TRANSFERRING DATA)

4 Required hardware

The following hardware is required.

GOT	Hardware
GT16	CF card/USB memory
GT15	CF card

5 Data to be backed up and restored

The following shows data to be backed up and restored.

Data other than the the following data cannot be backed up and restored.

(1) Basic model QCPU

Item	Description	File name
Parameter	Parameter for operating a programmable controller	PARAM.QPA
Intelligent function module parameter	Parameter for intelligent function modules	IPARAM.QPA
Sequence program	Program that the CPU operates	MAIN.QPG
SFC program	Sequence program with the SFC programming format	MAIN-SFC.QPG
File register	Data stored in file registers	MAIN.QDR
Device comment	Device comment to be stored in a programmable controller	MAIN.QCD
Device initial value	Setting the device initial value	MAIN.QDI

*1 The GOT restores file register data in the Flash card installed in the CPU module without checking if the data are overwritten.

(2) High Performance model QCPU

Item	Description	File name
Parameter	Parameter for operating a programmable controller	PARAM.QPA
Intelligent function module parameter	Parameter for intelligent function modules	IPARAM.QPA
Program	Program that the CPU operates (Including SFC program)	***.QPG
Device comment	Device comment to be stored in a programmable controller	***.QCD
Boot operation specification file	Batch file for starting programs stored in ROM and others	AUTOEXEC.QBT
Device initial value	Setting the device initial value	***.QDI
File register ^{*1}	Data stored in file registers	***.QDR
Sampling trace file ^{*2}	Sampling trace data that the specified device data is continuously collected with the specified timing	***.QTD
Failure history data ^{*2}	Failure history data that are recorded self-diagnostic results	***.QFD
Programmable controller user data	Any user-created data stored in a memory card	***.*** (Optional)

*1 The GOT restores file register data in the Flash card installed in the CPU module without checking if the data are overwritten.

*2 The item can be backed up only.

(3) Universal model QCPU

Item	Description	File name
Parameter	Parameter for operating a programmable controller	PARAM.QPA
Intelligent function module parameter	Parameter for intelligent function modules	IPARAM.QPA
Program	Program that the CPU operates (Including SFC program)	***.QPG
Device comment	Device comment to be stored in a programmable controller	***.QCD
Boot operation specification file	Batch file for starting programs stored in ROM and others	AUTOEXEC.QBT
Device initial value	Setting the device initial value	***.QDI
File register ^{*1}	Data stored in file registers	***.QDR
Sampling trace file ^{*2}	Sampling trace data that the specified device data is continuously collected with the specified timing	***.QTD
Programmable controller user data	Any user-created data stored in a memory card	***.*** (Optional)
File for storing device data	Device data used for the SP.DEVST and S.DEVLD instructions	DEVSTORE.QST

*1 The GOT restores file register data in the Flash card installed in the CPU module without checking if the data are overwritten.

*2 The item can be backed up only.

(4) CNC C70

Item	Description	File name
Machining program	All programs for operating a machine tool with a CNC	ALL.PRG
Parameter	Parameter for operating a CNC	ALL.PRM
Tool offset data	Offset data of the tool length compensation and tool radius compensation	TOOL.OFS
Workpiece offset data	Offset data between the machine coordinate system and workpiece coordinate system	WORK.OFS
Common variable	Macro variables applicable to different machining programs	COMMON.VAR
CNC ladder	User-created PLC program (ladder)	USERPLC.LAD

(5) Q series motion controller CPU

Item	Description	File name
Motion SFC program conversion file (control code)	File where SFC code, G-code and F/FS code files are combined and converted into CPU's Motion SFC program code memory storage format	sfcprog.cod
Motion SFC program conversion file (text)	File where G list and F/FS list files are combined and converted into CPU's Motion SFC program text memory storage format	sfcprog.bin
Motion SFC parameter file	Motion SFC control parameter setting information files	sfcprmD.bin ^{*1} sfcprm.bin ^{*2}
K code file	Internal code files of servo program	svprog.bin
System setting data file	System setting data information files	svsystemD.bin ^{*1} svsystemH.bin ^{*3} svsystem.bin ^{*4}
High speed read setting file	High speed read setting information files	svlatchD.bin ^{*1} svlatch.bin ^{*2}
Optional data monitor setting file	Optional data monitor information files	svsysmonD.bin ^{*1} svsysmon.bin ^{*2}
Servo data file	Axis data parameter block information files	svdataD.bin ^{*1} svdataH.bin ^{*3}
	Servo parameter information files	svparaH.bin ^{*3}
	Servo parameter information files	svdata.bin ^{*4} svdata2.bin ^{*4}
	Limit switch setting data information files	svls.bin
Mechanical system program conversion file	File after conversion of mechanical system program edit information file into internal codes	svmchprm.bin ^{*5}
Cam data conversion file	Cam data files of cam No.1 to 64	svcamprm.bin ^{*5}
	Cam data files of cam No.101 to 164	svcampr2.bin ^{*5}
	Cam data files of cam No.201 to 264	svcampr3.bin ^{*5}
	Cam data files of cam No.301 to 364	svcampr4.bin ^{*5}
Q series PLC common parameter file	Data files of Multiple CPU setting, I/O assignment, and others	param.wpa
Multiple CPU high speed refresh setting	Multiple CPU high speed refresh setting information files	svrefresh.bin ^{*1}

- *1 The data can be backed up or restored only with the Q172DCPU or Q173DCPU.
- *2 The data can be backed up or restored only with the Q172HCPU, Q173HCPU, Q172CPU, Q173CPU, Q172CPUN, or Q173CPUN.
- *3 The data can be backed up or restored only with the Q172HCPU or Q173HCPU.
- *4 The data can be backed up or restored only with the Q172CPU, Q173CPU, Q172CPUN, or Q173CPUN.
- *5 The data can be backed up or restored with the SV22 operating system software only.

(6) Data for software

Item	Description	File name
Label program	Data for GX Developer	PROJINFO.CAB
Symbolic data	Symbolic data for PX Developer	#FBDQINF.BIN



(1) Data that cannot be backed up

The GOT cannot back up device current values and data stored in device memories.

For collecting device current values, use the advanced recipe function.

For how to use the advanced recipe function, refer to the following manual.



GT Designer2 Version2 Screen Design Manual
(Section 12.3 Advanced Recipe Function)

For collecting data stored in device memories, use GX Developer.

(2) Names of files to be backed up

When characters other than the characters defined in the shift JIS code and ASCII code are used for file names, the file names may not be correctly displayed with the data backed up on the GOT.

For using the backup/restore function, use characters in the JIS code and ASCII code for file names.

(3) Backing up data stored in file registers

Because backing up data stored in file registers takes a long time, some file register data may have different time stamps in one backup data. Therefore, synchronism of the data is not assured.

When file register data with the same time stamp are required, take actions with the PLC system. For example, execute a sequence program that stops updating file registers, and then back up data stored in the file registers.

(4) Editing CNC data

The backed up CNC data includes machining programs, parameters, and others. Those data are related one another.

Therefore, when any of the data is changed with a text editor and others, the GOT cannot restore the backed up CNC data to the CNC.

For editing CNC data, use the CNC data I/O function.



12. CNC DATA I/O

(5) Motion controller CPU

(a) OS for motion controller CPU

The OS for the motion controller CPU cannot be backed up or restored.

For backing up or restoring setting data for the motion controller CPU, install an appropriate OS on the motion controller CPU in advance.

(b) Backup/restore for motion controller CPU

The GOT backs up or restores data stored in the SRAM built in the motion controller CPU, regardless of the operation mode.

For writing data to the FLASH ROM built in the motion controller CPU, restore the data to the SRAM, and then write the data in the SRAM to the FLASH ROM with MT Developer.

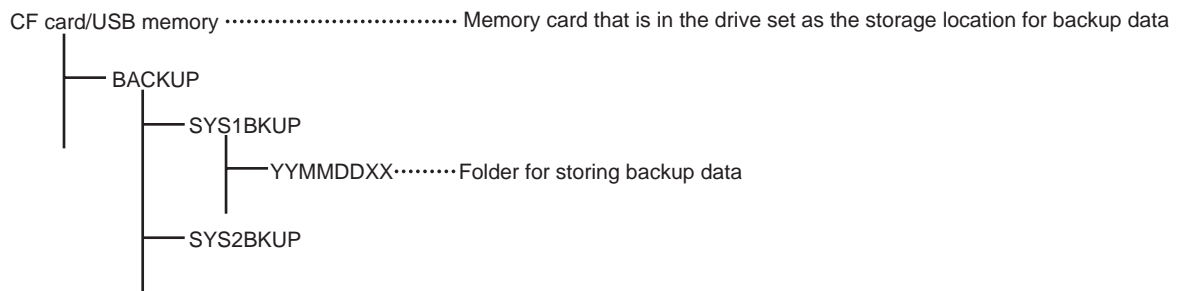
6 Backup data

(1) Storing backup data

When backups for the same channel are executed several times, the backup data are stored in a CF card or USB memory. (Backup data stored in the CF card or USB memory are not overwritten.)

(2) Storing backup data

Backup data are stored in a CF card or USB memory with the following folder structure.



(3) Folders for backup data

Backup data are stored by the folder, and a folder name (YYYYMMDDXX) is set as follows.

Example) Folder name for the 10th backup data for Ch.1 on November 22nd, 2006

Folder name: 06112210

Folder name		Description
YYYYMMDDXX	YY	Backup year (the last two digits of the year)
	MM	Backup month (01 to 12)
	DD	Backup date (01 to 31)
	XX	Serial number (00 to 99)

When names of folders for backup data include XX of 99, the backup data cannot be stored.

Up to 100 backups can be executed per channel in a day.

11.2.2 Access range

(1) Access range with connection types

The following shows a target controller of the backup/restore execution with each connection type.

Connection type	Target controller
Bus connection, Direct CPU connection, computer link connection, Ethernet connection	Host station

(2) With multi-channel function

With the multi-channel function, the backup and restoration is executed per channel.

(3) Multiple CPU system

When the target controller of the backup/restore is the multiple CPU, the backup is collectively executed for CPU No.1 to 4.


The restoration is executed with specifying target controllers of the restoration (multiple controllers possible).

11.2.3 Precautions

(1) Password for backup/restore

When a password for a controller is changed after setting the password for the backup/restore, set a new password for the backup/restore.

For setting the password for the backup/restore, refer to the following.

 Subsection 11.3.3 Security and password

(2) Restoration

(a) Communication status between GOT and target controllers

For restoring data, enable the target controllers of the restoration to communicate with the GOT.

When the target controllers of the restoration cannot communicate with the GOT, the restoration cannot be executed.

(b) STOP status during restoration

CPU for the programmable controller and motion controller are in the STOP status with the remote STOP before the restoration.

For the CNC C70, the CNC ladder is in the STOP status.

The CPU and CNC ladder remain in the STOP status after the restoration is completed.

Restart the controllers.

(c) When restoration is canceled

When the restoration is canceled, all the data are not restored to the controllers and the controllers may not correctly operate.

When the restoration is canceled, be sure to execute the restoration again.

The CPU and CNC ladder remain in the STOP status after the restoration is canceled.

Restart the controllers.

(d) System configuration with controllers for restoration

Set the same system configuration with the controllers for the restoration as those for the backup.

Failure to do so disables the GOT to restore data to the controllers.

When the system configuration with the controllers for the restoration is the same as those for the backup, the GOT can restore data to the controllers even if the connection type and CH No. for the restoration differ from those for the backup.

(e) Controller operations

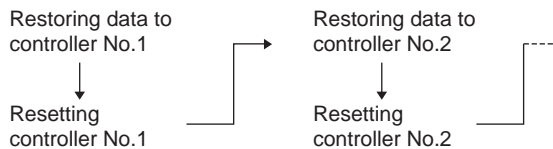
Controllers may malfunction by changing set values, device values, and others during the restoration.

Check that data to be restored is the appropriate data, and then execute the restoration with paying attention to the controller operations.

(f) Precautions for multiple CPU system

For the multiple CPU system including a QCPU (Q mode) at the factory default setting or with a formatted memory, the GOT cannot restore data to multiple controllers simultaneously.

Restore data to the controllers respectively by referring to the following procedure.



(3) Operations for backup/restore

(a) Precautions for GT Designer2

Do not execute the following operations with GT Designer2 during the backup/restore.

Operation with GT Designer2			
OS installation, Special data download	BootOS installation,	CoreOS installation,	Project download,

When the above operations are executed, the backup/restore is stopped.

(b) Precautions for GX Developer

- Do not access the target controller of the backup/restore with GX Developer during the backup/restore.
Doing so stops the backup/restore.
- Do not execute the backup/restore on the GOT while the target controller of the backup/restore is accessed by GX Developer.
Doing so causes a communication error on GX Developer. (The backup/restore is executed.)

(4) Motion controller CPU

(a) Backup

For backing up data for controllers including the motion controller CPU, do not set the motion controller CPU to the installation mode.

When the motion controller CPU is set to the installation mode, the GOT does not back up data for the motion controller CPU. (The GOT backs up data for the other controllers on the same base unit.)

(b) Restoration

For restoring data to controllers including the motion controller CPU, do not set the motion controller CPU to the installation mode or test mode.

Doing so stops the restoration operation of the GOT.

When the restoration is stopped, be sure to execute the restoration again.

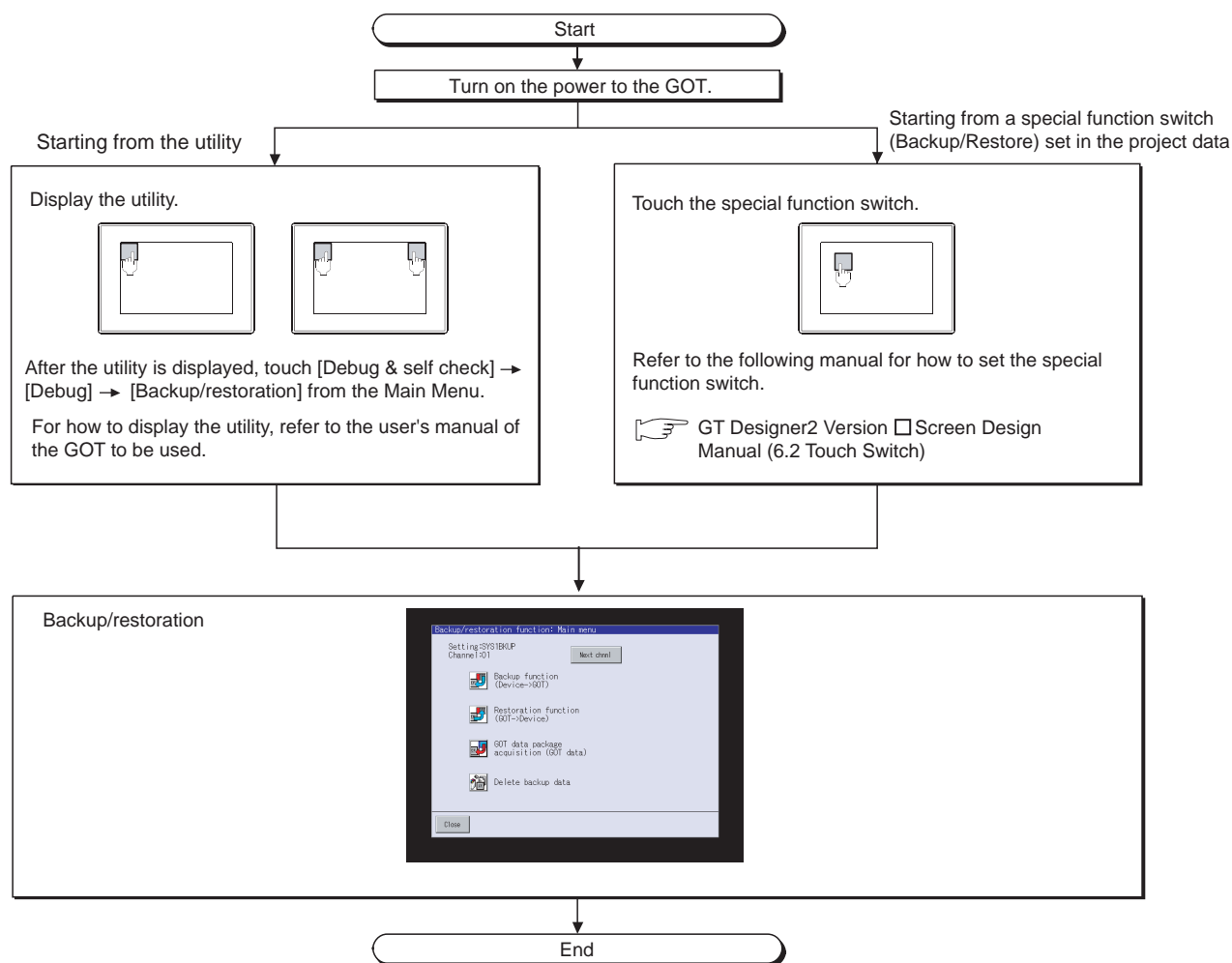
Failure to do so causes the GOT not to write all the data into the controllers, resulting in incorrect operations of the controllers.

11.3 Display Operation

11.3.1 Outline before starting

1 Operations before displaying

The following describes the outline for displaying the operation screen for the backup/restore after installing Backup/Restore (extended function OS) on the GOT.



(1) How to display the utility

For how to display the utility, refer to the following.

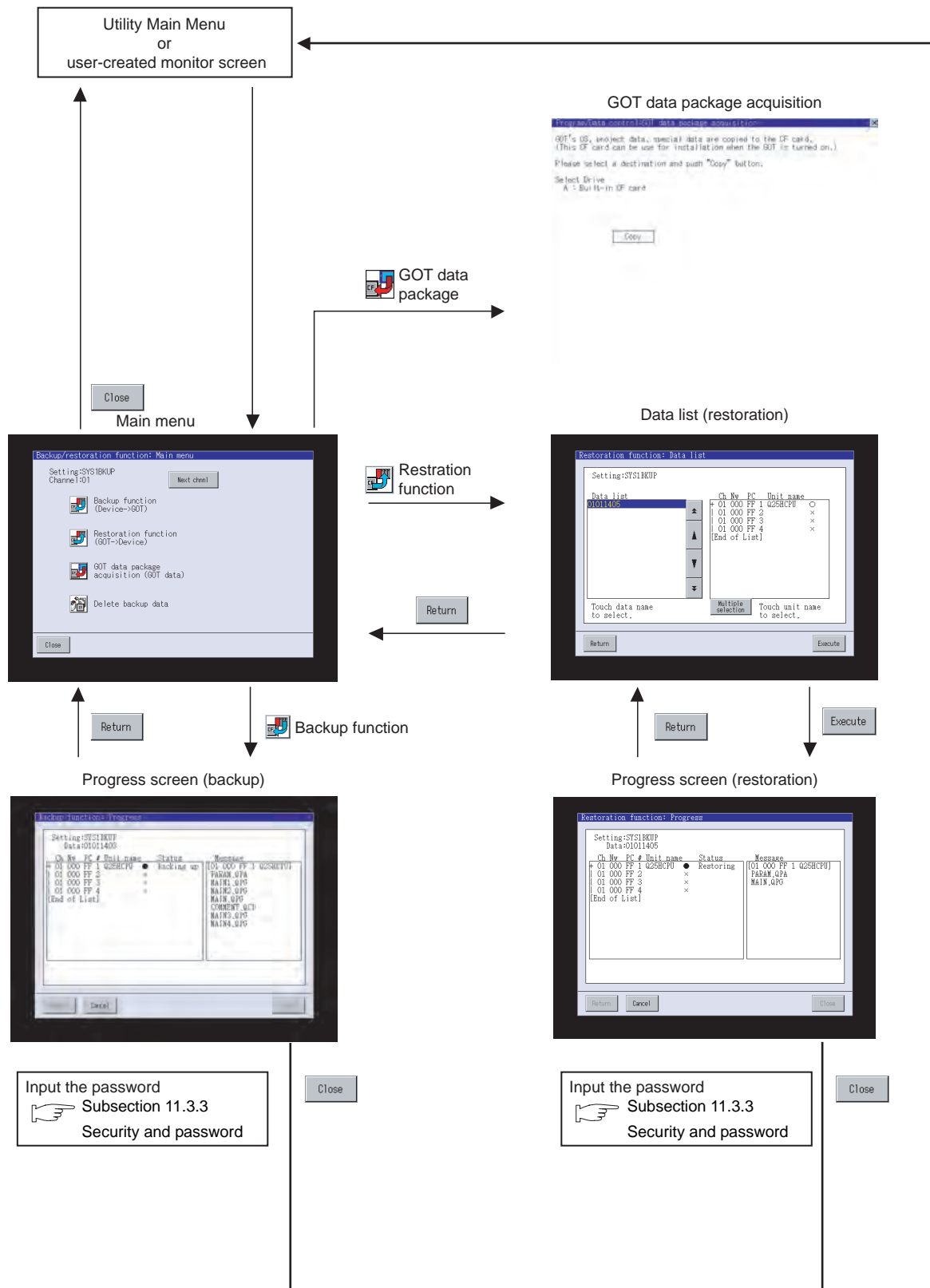


GT16 User's manual (8.3 Utility Display)
GT15 User's manual (9.3 Utility Display)

(2) When GOT has no project data

The backup/restore can be started with the utility even though the GOT has no project data.

2 Changing screens



11.3.2 Setting storage location for backup data

Set the storage location that backup data are stored.

Set the storage location for backup data in the backup/restoration setting of the utility.

1 Display procedure

- (1) For GT16
Select [Debug] → [Debug setting] → [Backup/restoration setting] from the utility.
- (2) For GT15
Select [GOT setup] → [Backup/restoration setting] from the utility.

2 Settings

GOT setup:Backup/restoration setting

Drive for backup setting A:Build-in CF card

Drive for backup data A:Build-in CF card

OK

Item	Description
Drive for backup setting	Specify the drive for storing backup settings, including parameters and passwords for controllers.
Drive for backup data	Specify the drive for storing backup data.
Trigger backup setting	The GOT automatically backs up data when triggers (Rise, Time) specified for each backup setting are met.
Max. of backup data	Set the maximum number of backup data to be stored. (When 0 is specified, the GOT does not check the number of backup data to be stored.)



Backup/restoration setting

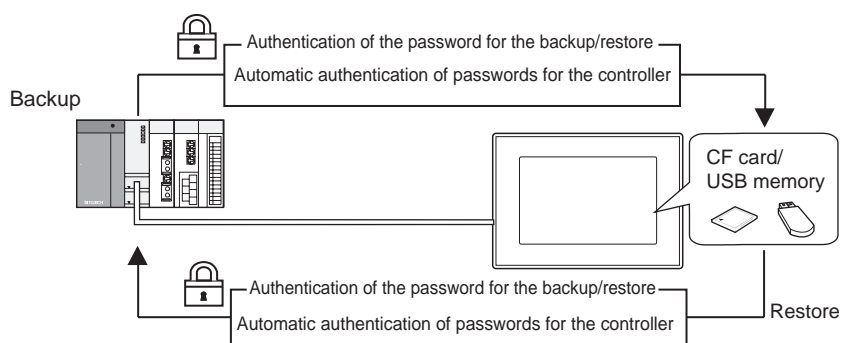
The backup/restoration setting can also be set in the GOT setup on GT Designer2. For the GOT setup of GT Designer2, refer to the following manual.



GT Designer2 Version □ Screen Design Manual
(Section 3.8 Setting of GOT Display and Operations (GOT Setup))

11.3.3 Security and password

By setting the passwords, the password authentication is available when the backup/restore is executed. The password authentication uses the password for the backup/restore and passwords for controllers.



The following shows the passwords used for the backup/restore.

Password	Description
Password for backup/restore	Password for the backup/restore function Set the password on the GOT at the first backup. Before setting the password, set passwords for controllers in advance.
Passwords for controllers	Passwords set for the files for the target controllers of the backup/restore Set the passwords with software for the controllers when writing the files to the controllers.

After the first backup (after setting the password for the backup/restore), the user has no need to input the passwords for the controllers. (The passwords for the controllers are automatically verified.)
The following shows the security advantages.

User	Advantage
Administrator	No need to disclose the passwords for the controllers to the operator (Preventing anyone other than the administrator to browse or edit setting data for the controllers.)
Operator	The backup/restore is executed by using the password for the backup/restore only. (No need to input passwords for the controllers)



Before setting password for backup/restore

When the user forgets the password for the backup/restore, the backup/restore cannot be executed.

In that case, execute the backup again by using a formatted or new CF card or USB memory.

For how to set the password for the backup/restore, refer to the following.

☞ This section **1** Setting password for backup/restore

How to use the password for the backup/restore, refer to the following.

☞ This section **2** How to use password for backup/restore

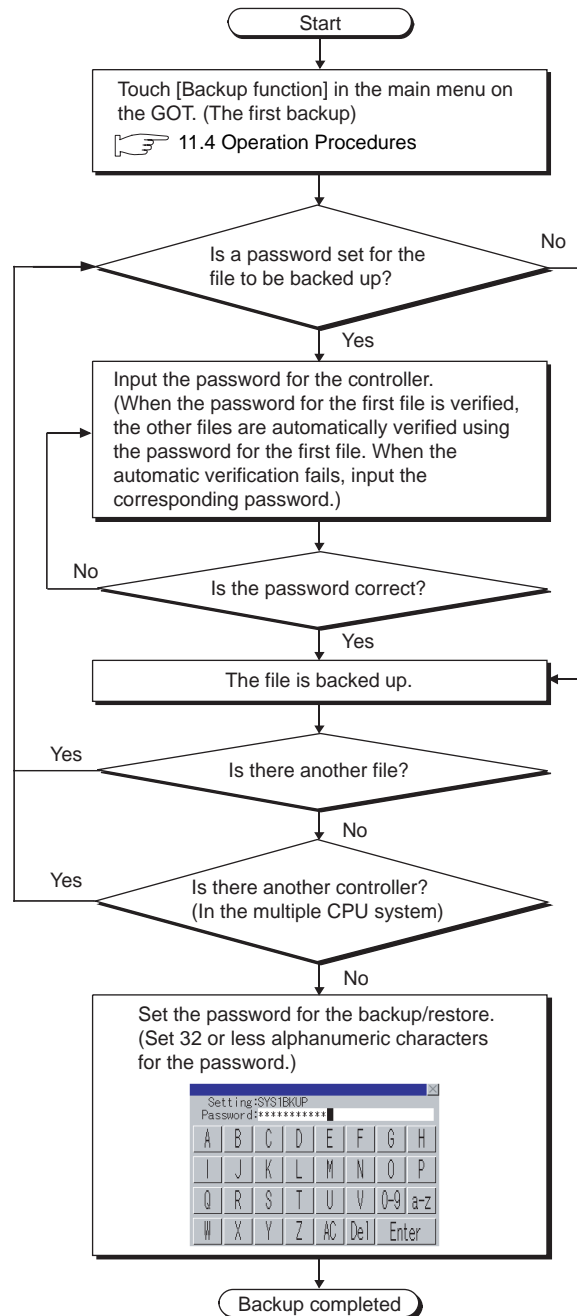
1 Setting password for backup/restore

The password for the backup/restore can be set only when the following condition is satisfied at the first backup.

- When passwords are set for the files for the backup target controller

At the first backup, the password authentication for the controller is required.

The following shows the operating procedure at the first backup.





(1) Setting password

For ensuring the security, setting a password of 8 or more characters that cannot be easily guessed is recommended.

When the password is leaked, the same system can be created. Pay enough attention to managing the password.

(2) Passwords for motion controller CPU

(a) File name

When a password for a motion controller CPU data is input, the GOT does not display the file name.

The GOT displays the data type only.

(b) Setting passwords for data without any contents

When contents of the following motion controller CPU data do not exist, do not set any passwords for the data.

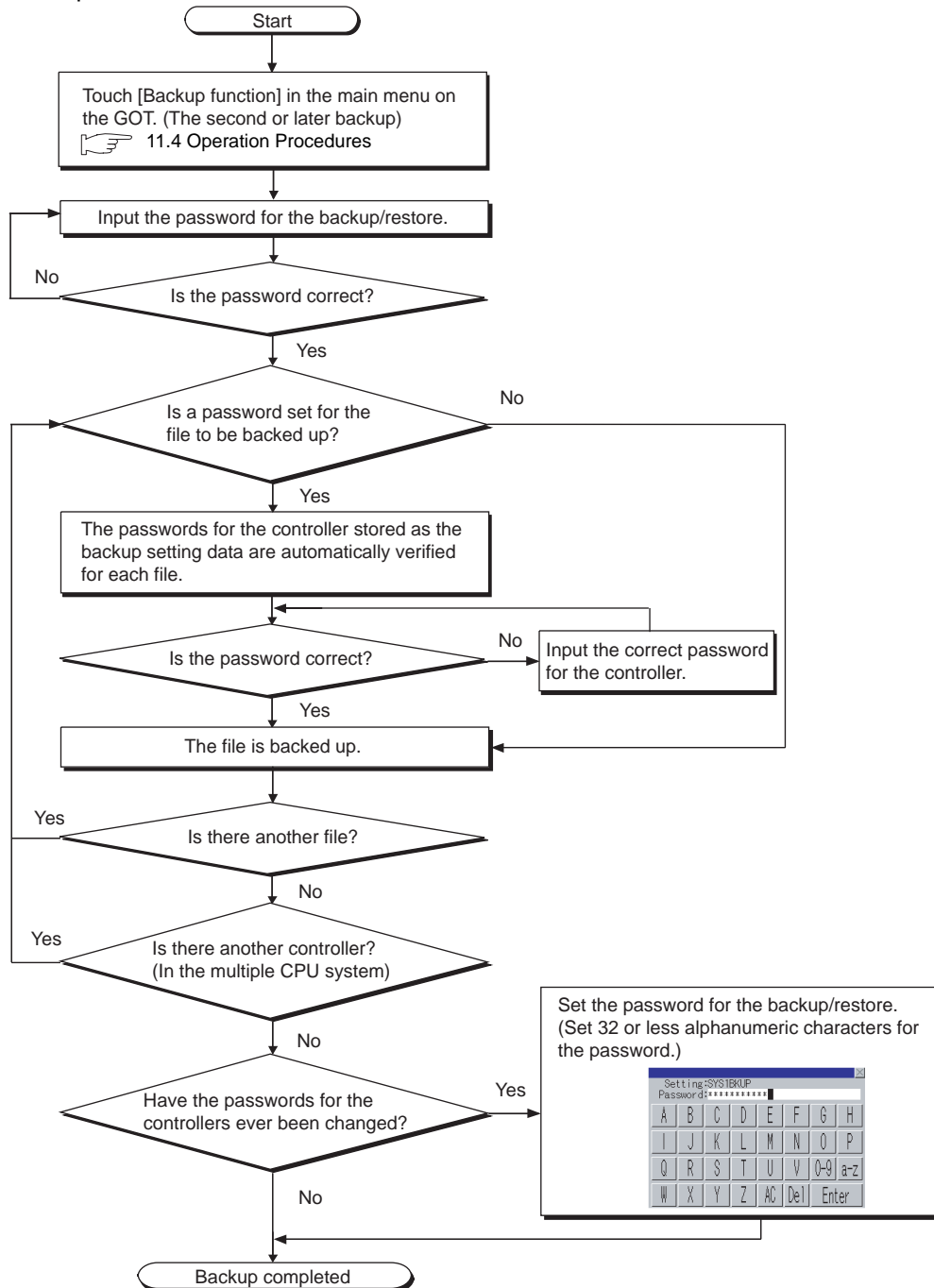
▪ SFC program ▪ Mechanical system program ▪ Cam data

When passwords are set for the data without any contents, the automatic password authentication is unavailable when the GOT executes the backup. As a result, the user must input the passwords each time.

2 How to use password for backup/restore

(1) Backup

The following shows the operating procedure for the backup after setting the password for the backup/restore.

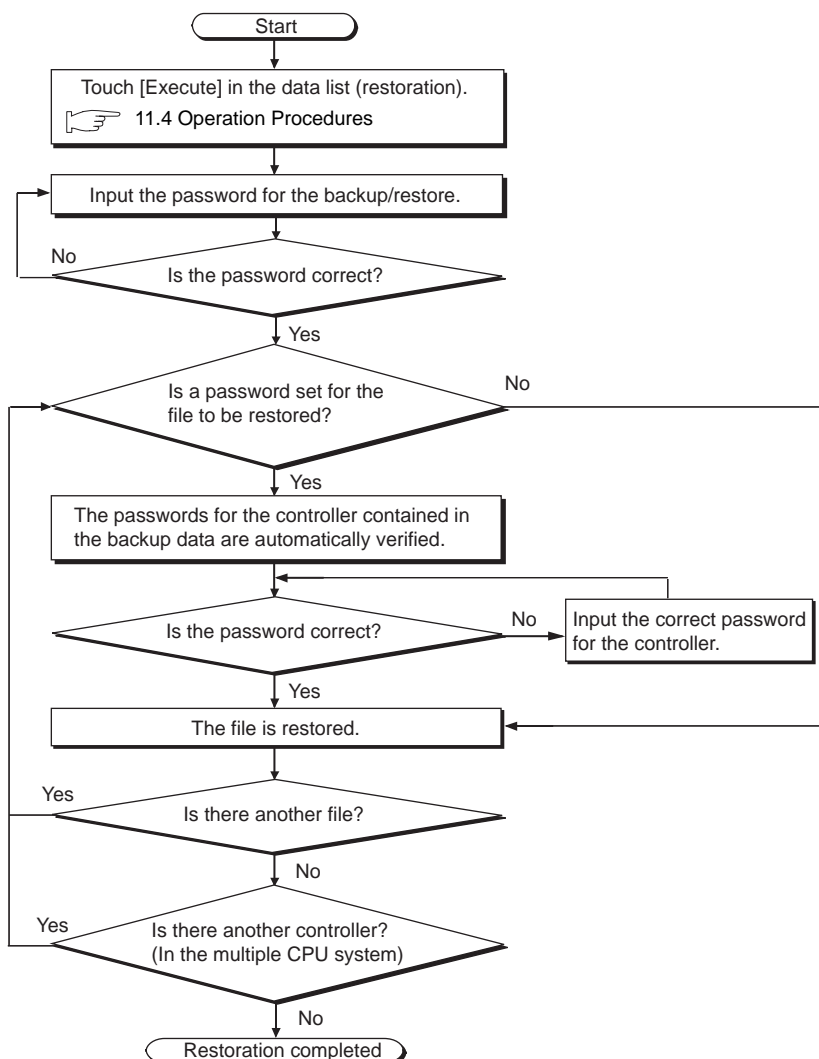


Point When passwords for controllers are changed

When the password input is cancelled and the backup is stopped, the backed up files until the backup is stopped are all deleted.

(2) Restoration

The following shows the operating procedure for the restoration after setting the password for the backup/restore.

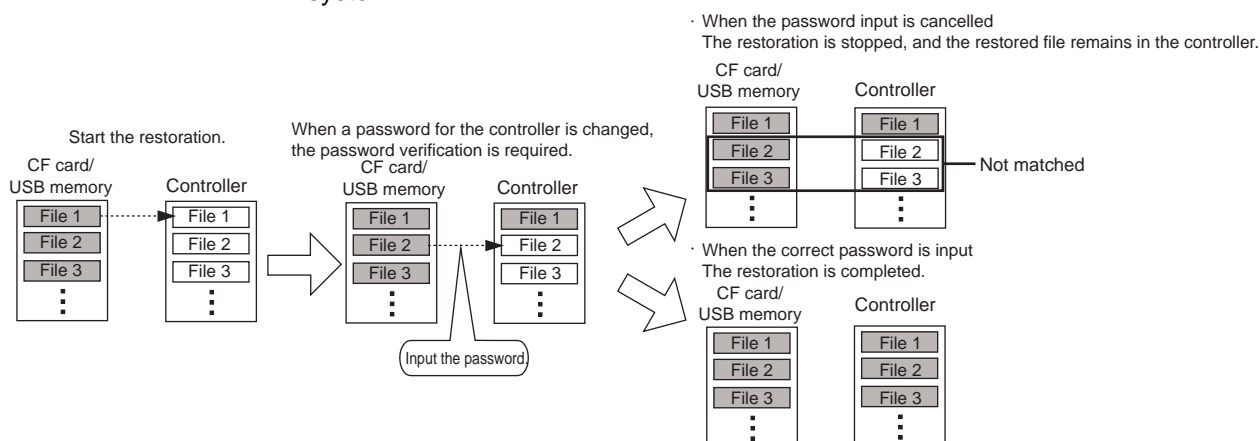


Point

When passwords for controllers are changed

When the password input is cancelled and the restoration is stopped, the restored files until the restoration is stopped remain in the controller.

When only any of the files are restored, the data can be inconsistent in the entire system.



11.3.4 Trigger backup

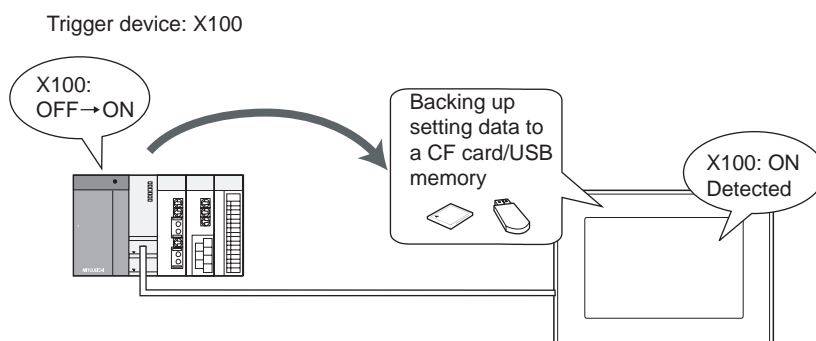
The GOT can automatically back up setting data for controllers with the trigger device or the days and time set.

Setting the trigger type selects whether to execute the backup with the trigger device or with the days and time.

- (1) When trigger type is set to [Rise]

The GOT executes the backup when the set trigger device turns on.

Use the backup with the trigger device for automatically backing up setting data for controllers after the setting data are changed.

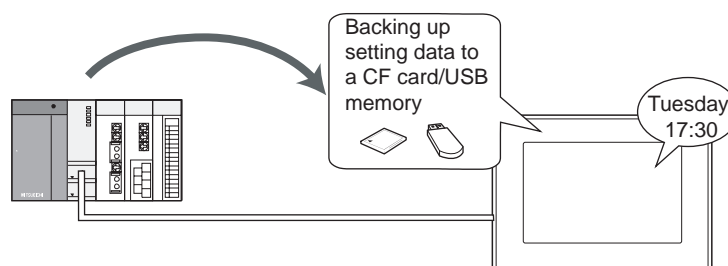


- (2) When trigger type is set to [Time]

The GOT executes the backup at the specified time on the specified days.

Use the backup with the time for backing up setting data periodically.

Setting GOT to back up data at 17:30 on Tuesdays



- (3) Maximum number of backup data

With the trigger backup, the maximum number of backup data to be stored can be specified.

When the number of backup data exceeds the maximum number of backup data, the GOT automatically deletes the oldest backup data.

Therefore, the GOT does not fail to store the latest backup data.

- (4) Comparing and updating backup data

For the backup, the GOT compares the previous backup data with current setting data for each controller on the same base unit.

When the current setting data for any of the controllers differ from the previous backup data, the GOT backs up setting data for all the controllers on the same base unit.

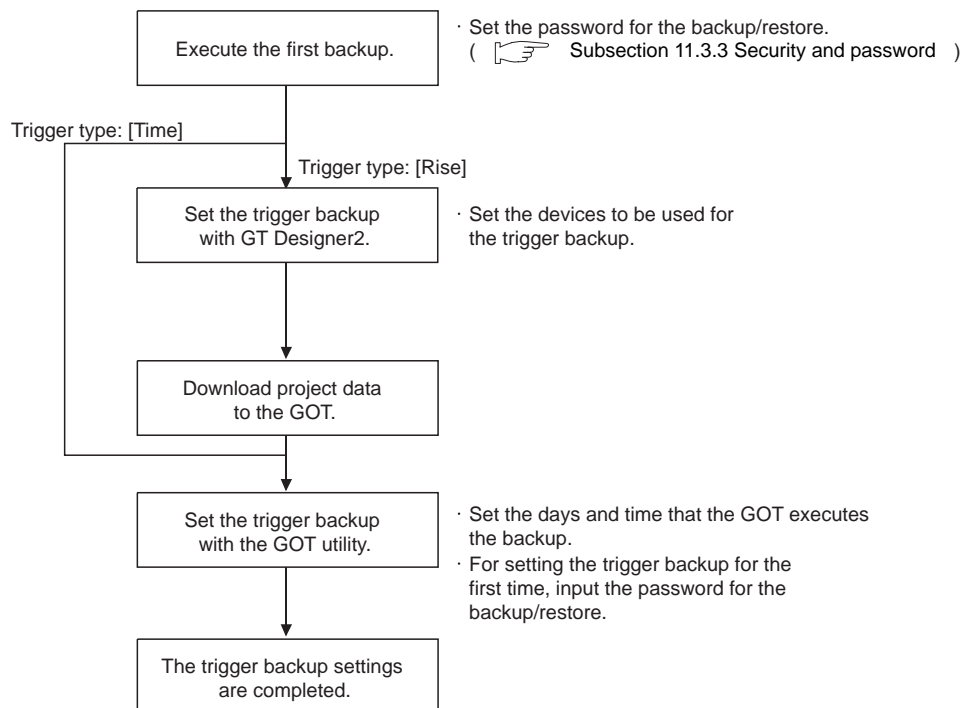
When the current setting data for all the controllers are the same as the previous backup data, the GOT does not execute the backup.

Therefore, the GOT does not store the same backup data.

1 How to set trigger backup

(1) Flow of settings

The following shows the flow of settings for using the trigger backup.



Point

Inputting password for backup/restore

The GOT automatically executes the backup when the trigger condition is met. The password authentication with the password for the backup/restore is not executed.

By executing the password authentication with the password for the backup/restore when setting the trigger backup with the GOT utility, unauthorized users cannot execute the backup.

Without inputting the password for the backup/restore when setting the trigger backup, an error occurs and the GOT does not execute the backup even if the trigger condition is met.

Input the password for the backup/restore in the trigger backup setting of the GOT utility.

For setting the trigger backup with the GOT utility, refer to the following.

- GT16 User's Manual (Section 11.2.2 Trigger Backup Settings)
- GT15 User's Manual (Section 11.13 Trigger Backup Settings)

(2) Setting items for trigger backup

Set the trigger backup with GT Designer2 and the GOT utility.

For the setting items for GT Designer2, refer to the following.

- GT Designer2 Version2 Screen Design Manual
(Section 3.8 Setting of GOT Display and Operations (GOT Setup))

For the setting items for the GOT utility, refer to the following.

- GT16 User's Manual (Section 11.2.2 Trigger Backup Settings)
- GT15 User's Manual (Section 11.13 Trigger Backup Settings)

2 Controlling backup with devices

The GOT controls the trigger backup with devices.

The following shows the devices to be used for the trigger backup.

- Trigger device
- Process notification device
- Backup error notification device
- Trigger backup processing setting No. notification (GS657)
- Trigger backup data send delay (GS521)

For the devices and how to set the devices, refer to the following.

☞ GT Designer2 Version2 Screen Design Manual
(Section 2.9.1 GOT internal devices)
(Section 3.8 Setting of GOT Display and Operations (GOT Setup))

(1) When normal backup is executed

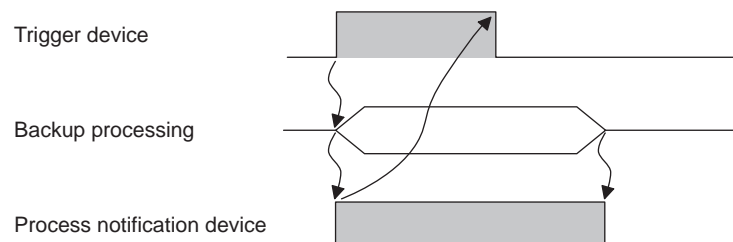
(a) When trigger type is set to [Rise]

Turn on the trigger device, and then the GOT starts the backup.

When the backup is started, the process notification device turns on.

Turn off the trigger device right after the process notification device turns on. (The trigger device does not automatically turn off.)

When the backup is completed, the process notification device turns off.

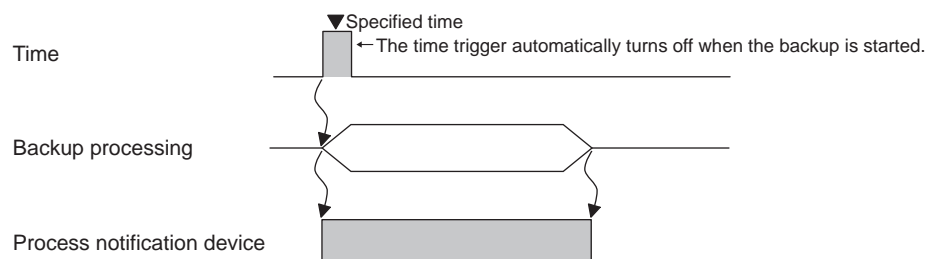


(b) When trigger type is set to [Time]

The GOT starts the backup at the time specified for the trigger backup.

When the backup is started, the process notification device turns on, and the time trigger automatically turns off.

When the backup is completed, the process notification device turns off.



(2) Error handling

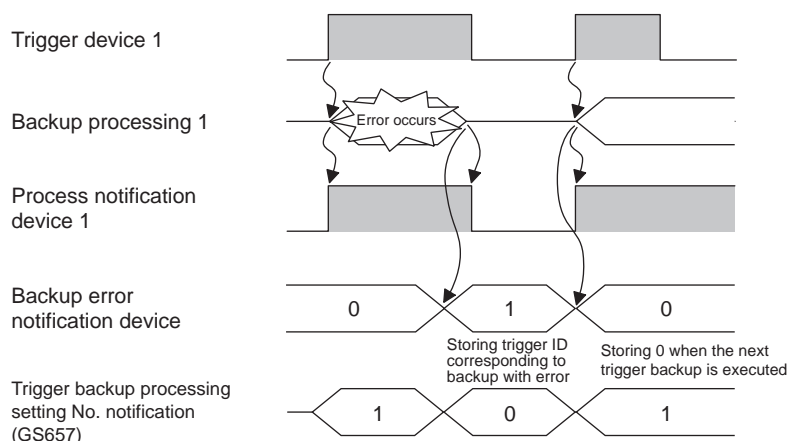
When an error occurs during the trigger backup, the backup error notification device stores the trigger ID corresponding to the trigger setting set for the backup with the error, and a system alarm occurs.

Check the system alarm, and then remove error causes.

For system alarms and corrective actions, refer to the following manual.

 GT15 User's Manual

The backup error notification device stores 0 when the next trigger backup is executed.



(3) Setting send delay time

The backup/restore function can set the delay time for backup communication intervals.

Setting of the delay time can reduce the load of other processes (such as monitoring objects) with the backup process.

The actually time set by the set value is listed as follows.

Set value	Delay time
0	None
1 to 100	Set value × 5(ms)
101 or more	500(ms)



Setting of trigger backup data send delay


Backup communication times are longer than a default when the trigger backup data send delay is set.

Set the suitable delay time to match the processing condition of backup function and others (such as monitoring objects).

3 Precautions for trigger backup

The following shows precautions for the trigger backup.

- (1) GOT operations during trigger backup
The GOT may take a long time to monitor devices and to operate during the trigger backup.
Execute the trigger backup when the operator does not operate the GOT.
Updating data with the functions that collect device values, including the logging function, may also take a long time.
- (2) Displaying device name on GOT
When the trigger device is set to [Rise], the GOT displays the device name of [??] without the extended function OS of the device name converter installed.
For displaying the device name correctly, install the extended function OS of the device name converter on the GOT.
- (3) First backup
The trigger backup is unavailable for the first backup.
Manually execute the first backup, and then set the password for the backup/restore and passwords for controllers. After the settings, set the trigger backup.
- (4) Passwords for controllers
When passwords for controllers stored in the backup setting differ from current passwords for the controllers, the backup operation is canceled.
For executing the trigger backup, check that passwords for controllers have no changes.
When the backup operation is canceled, manually execute the backup again, and then input correct passwords.
- (5) Checking file register changes
When the trigger backup is frequently executed, set [Check the file register changes] to [Not execute] with the GOT utility because data stored in file registers frequently changes.
When [Check the file register changes] is set to [Execute], the GOT backs up data stored in the file registers every time the trigger condition is met even if the other setting data for the controller are not changed.
As a result, the number of backup data increases in the CF card. When the number of backup data exceeds the maximum number of backup data, old backup data are deleted.
For obtaining data stored in file registers only, use the advanced recipe function.
For how to use the advanced recipe function, refer to the following.

 GT Designer2 Version2 Screen Design Manual
(Section 12.3 Advanced Recipe Function)
- (6) Backing up data when CNC and motion controller CPU are on one base unit
When the CNC and/or the motion controller CPU are on one base unit, the GOT does not compare the previous backup data with current setting data for the controllers.
As a result, the GOT executes the backup even if the setting data for the controllers have no changes.
For backing up setting data only when the data are changed, set the trigger type to [Rise].
Create a sequence program so that the trigger device turns on only when the setting data are changed. Therefore, the number of backup data can be minimized.

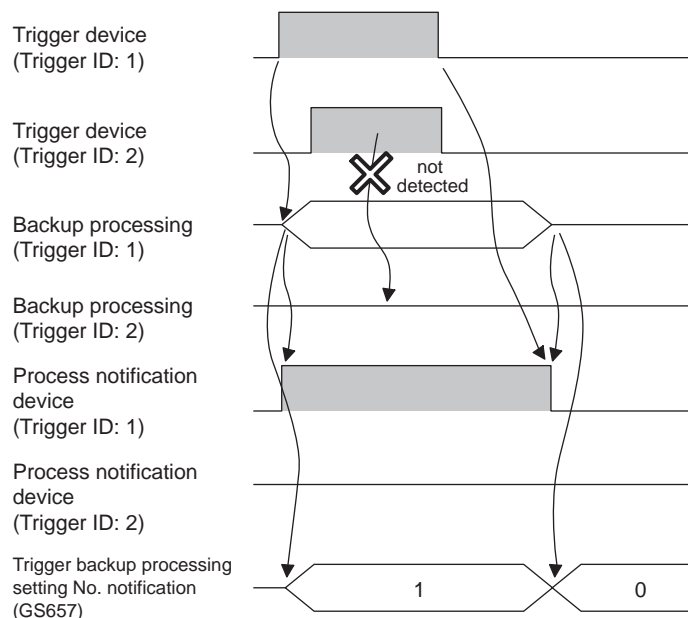
(7) Screens that trigger backup can be executed

The trigger backup can be executed only when the GOT displays a monitor screen.

- (a) When the trigger condition is met while the GOT displays a screen other than monitor screens, including the utility screen and ladder monitor screen, the GOT does not execute the backup. When a screen other than monitor screens is switched to a monitor screen, the GOT executes the backup.
- (b) When a monitor screen is switched to a screen other than monitor screens during the trigger backup, the GOT stops the backup and the GOT deletes the data in process. When the screen is switched to a monitor screen, the GOT executes the backup again.
- (c) When the following are operated, the GOT does not execute the backup even if a screen other than monitor screens is switched to a monitor screen.
 - Restarting the GOT
 - Changing the trigger backup setting with the GOT utility

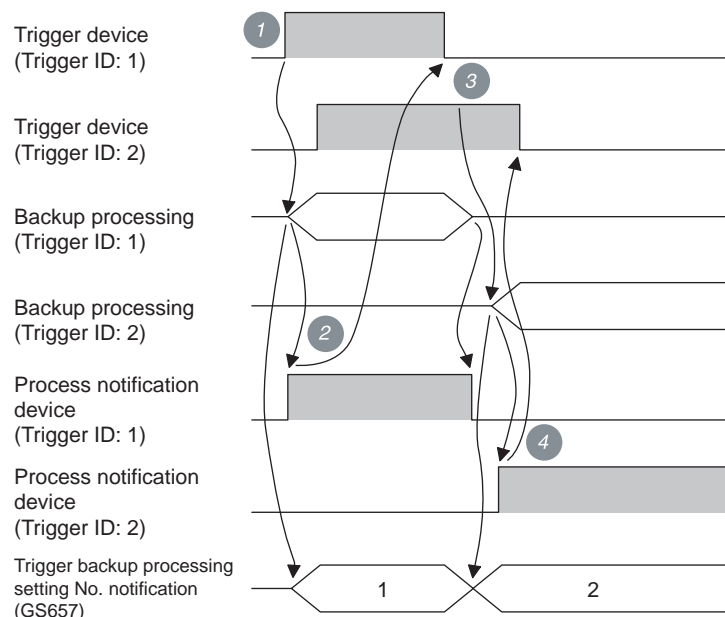
(8) When another trigger condition is met during backup

The GOT cannot detect that another trigger condition is met.

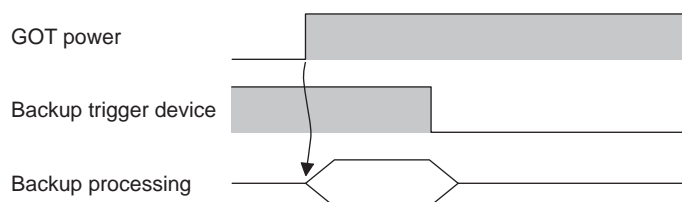


For ensuring the trigger backup, establish a handshake with the trigger device and the process notification device.

An example of a handshake is shown on the next page.



- ① The trigger device (Trigger ID: 1) turns on, and then the GOT starts the backup (Trigger ID: 1).
 - ② When the backup is started, the process notification device (Trigger ID: 1) turns on, and the trigger backup processing setting No. notification (GS657) stores the trigger ID. When the process notification device turns on, the trigger device (Trigger ID: 1) turns off.
 - ③ When the backup (Trigger ID: 1) is completed, the GOT recognizes that the trigger device (Trigger ID: 2) is on and the GOT starts the backup (Trigger ID: 2).
 - ④ When the backup is started, the process notification device (Trigger ID: 2) turns on, and the trigger backup processing setting No. notification (GS657) stores the trigger ID. When the process notification device turns on, the trigger device (Trigger ID: 2) turns off.
- (9) When multiple trigger conditions are simultaneously met
The GOT executes the backup with the smallest trigger ID first.
- (10) When trigger device is on at GOT startup
The GOT recognizes that the trigger condition is met, and then the GOT executes the backup. Create a sequence program so that the trigger device turns off after the GOT checks that the process notification device turns on.



11.4 Operation Procedures

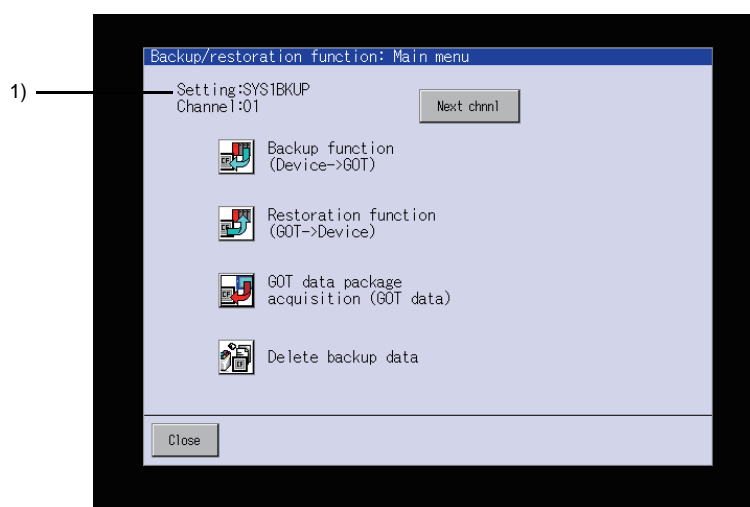
This section describes the backup/restore display details and the functions of the keys displayed on the screen.

The display screen for the backup/restore differs depending on the GOT to be used. This section explains the display screen with the GT1575-V screen.

11.4.1 Main menu

The following describes the display and the key functions on the Backup/restoration function : Main menu screen.

1 Display details



No.	Display details
1)	Displays the target channel No. of the backup and the setting name for the backup/restore (Fixed).

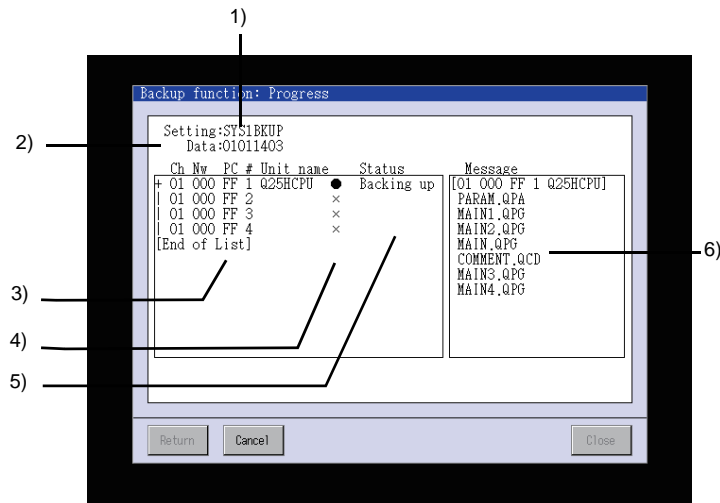
2 Key functions

Key	Function
Next chnnl	Switches the target channels of the backup/restore.
Backup function	Starts the backup.
Restoration function	Switches the screen to the Restoration function: Data list screen.
GOT data package	Switches the screen to the setting screen of the GOT data package acquisition. GT16 User's Manual (Section 11.3.3 GOT Data Package Acquisition) GT15 User's Manual (Section 13.12 GOT Data Package Acquisition) The key is not displayed on the GT1555-Q and GT1550-Q.
Delete backup data	Deletes the oldest data among backup data already stored in a CF card or USB memory in the GOT.
Close	Ends the backup/restore, and then the screen is switched to the backup/restore startup screen.

11.4.2 Progress screen (backup)

This following describes the display details and the key functions on the Backup function: Progress screen.

1 Display details



No.	Display details
1)	Displays the setting name for the backup/restore (Fixed).
2)	Displays the backup data name.
3)	Displays the channel No., network No., station No., module No., and unit name for the target controller of the backup.
4)	Displays the target controller status of the backup. ● : Backup target ○ : Not backup target × : Access disabled
5)	Displays the backup progress status. Backing up : The backup is in processing. Aborting : The backup cancellation is in processing. Completed : The backup is completed.
6)	Displays the file name in processing.

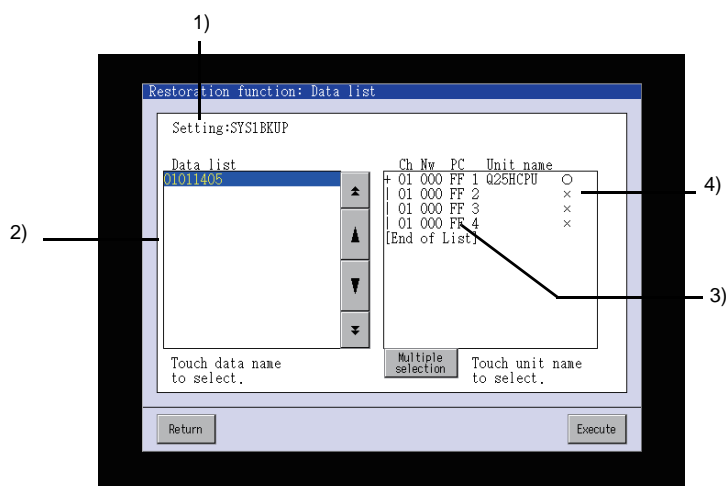
2 Key functions

Key	Function
Return	Switches the screen to the Backup/restoration function: Main menu screen.
Cancel	Cancels the backup.
Close	Ends the backup/restore, and then the screen is switched to the backup/restore startup screen.

11.4.3 Data list (restoration)









The following describes the display details and the key functions on the Restoration function: Data list screen .

1 Display detail



No.	Display details
1)	Displays the setting name for the backup/restore (Fixed).
2)	Displays backup data stored in a CF card or USB memory. Select a backup data to be restored with touching the data.
3)	Displays the channel No., network No., station No., module No., and unit name for the target controller of the restoration.
4)	Displays the target controller status of the restoration. Select a target controller of the restoration with touching the controller. <ul style="list-style-type: none"> ● : Restoration target ○ : Not restoration target × : Access disabled

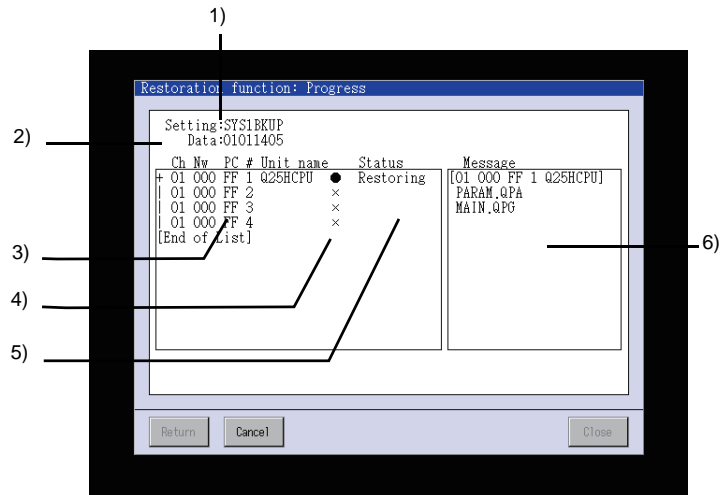
2 Key functions

Key	Function
 	Scrolls the data list up and down by one line.
 	Scrolls the data list up and down by one page.
 / 	Switches the number of target controllers of the restoration. <ul style="list-style-type: none"> • Single selection: Select [Single selection] when selecting only one target controller of the restoration. • Multiple selection: Select [Multiple selection] when selecting multiple target controllers of the restoration.
	Switches the screen to the Backup/restoration function: Main menu screen.
	Starts the restoration.

11.4.4 Progress screen (restoration)

This following describes the display details and the key functions on the Restoration function: Progress screen.

1 Display details



No.	Display details
1)	Displays the setting name for the backup/restore (Fixed).
2)	Displays the backup data name.
3)	Displays the channel No., network No., station No., module No., and unit name for the target controller of the restoration.
4)	Displays the target controller status of the restoration. <ul style="list-style-type: none"> ● : Restoration target ○ : Not restoration target × : Access disabled ? : Restoration failed
5)	Displays the restoration progress status. <ul style="list-style-type: none"> Restoring : The restoration is in processing. Aborting : The restoration cancellation is in processing. Completed : The restoration is completed. Abort : The restoration cancellation is completed. Comm.error : The restoration is failed with the communication failed. Data error : The restoration is failed with backup data errors.
6)	Displays the file name in processing.

2 Key functions

Key	Function
Return	Switches the screen to the Backup/restoration function: Main menu screen.
Cancel	Cancels the restoration.
Close	Ends the backup/restore, and then the screen is switched to the backup/restore startup screen.

11.5 Backup Data Conversion Tool

Backup data are created by the backup/restore function, and the backup data are stored in a CF card. Backup Data Conversion Tool enables the backup data to convert into data editable with GX Developer. The tool also enables backup data edited by GX Developer to convert into data for the restoration on the GOT.



Data to be converted

Only backup data created by the backup/restore function can be converted with Backup Data Conversion Tool.

The following data cannot be converted with Backup Data Conversion Tool.

- Newly-created data by GX Developer
- Backup data with new files added by GX Developer

11.5.1 Operating environment

Use Backup Data Conversion Tool in the following operating environment.

Item	Description
Personal computer	PC/AT compatible personal computer that Windows® runs on
Operating system	Microsoft® Windows® 2000 Professional Operating System (English version) Microsoft® Windows® XP Professional Operating System (English version) Microsoft® Windows® XP Home Edition Operating System (English version)
Computer	Refer to the following "Applicable operating system and performance required for personal computer".
CPU	
Memory	
Hard disk space	500KB or more
Disk drive	CF card drive
Display color	High Color (16 bits) or more
Display	Resolution 640 × 480 dots or more
Hardware	CF card
Others	The mouse and keyboard must be compatible with the above OS.

Applicable operating system and performance required for personal computer

Operating system	Performance required for personal computer	
	CPU	Memory
Microsoft® Windows® 2000 Professional Operating System (English version)	Pentium® 200MHz or more	64MB or more
Microsoft® Windows® XP Professional Operating System (English version) Microsoft® Windows® XP Home Edition Operating System (English version)	Pentium II® 300MHz or more	128MB or more

11.5.2 How to install and start Backup Data Conversion Tool

Installing Backup Data Conversion Tool is not required.

Start Backup Data Conversion Tool with the following procedures.

- ① Copy BkupRstrDataConv.exe to the hard disk and others on the personal computer.
Get the above file from one of the followings.
 - BkupRstrDataConv folder in the Disc1 CD-ROM of GT Works2 or GT Designer2
 - GTD2 folder on the personal computer
 - MITSUBISHI ELECTRIC FA NETWORK SERVICE website
(MELFANSweb website: <http://wwwf2.mitsubishielectric.co.jp/english/index.html>)
- ② Double-click the copied BkupRstrDataConv.exe, and then the tool starts. Refer to the following, and set the tool.

9

SERVO AMPLIFIER
MONITOR

10

CNC MONITOR
FUNCTION

11

BACKUP/RESTORE

12

CNC DATA I/O

13

SFC MONITOR

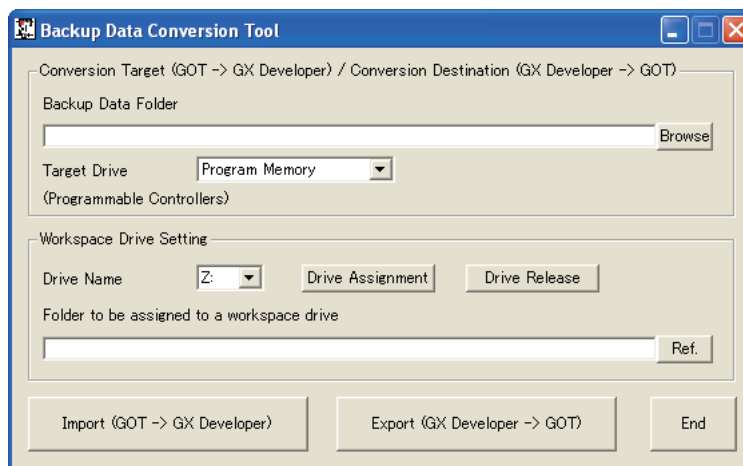
APPENDICES

INDEX

11.5.3 How to use Backup Data Conversion Tool

1 Setting items

The following shows the setting items of Backup Data Conversion Tool.



Item	Description
Conversion Target	Specify data to be converted.
Backup Data Folder*1	Specify the storage location of the backup data (setting data: UNITINFO.G1B) created with the backup/restore function by clicking the Browse button.
Target Drive	Select the PLC drive that has setting data to be converted.
Workspace Drive Setting	Set the settings for editing backup data with GX Developer.
Drive Name	Specify [IC Card drive] to be specified for [Read IC memory card] and [Write IC memory card] on GX Developer.
Folder to be assigned to a workspace drive*1	Specify the target folder of [Drive Name] by clicking the Ref. button.
Drive Assignment	Click the item, and then [Folder to be assigned to a workspace drive] is assigned to [Drive Name]. ([Folder to be assigned to a workspace drive] is automatically assigned to [Drive Name] normally. Use the button when the drive assignment setting is canceled by clicking the Drive Release button and a drive is assigned again.)
Drive Release	Click the item, and then the drive assignment setting is canceled.
Import (GOT → GX Developer)	Converts the backup data to data editable with GX Developer
Export (GX Developer → GOT)	Converts data edited by GX Developer to data applicable to the backup/restore.
End	Ends Backup Data Conversion Tool.

For details of *1, refer to the following.

*1 Folder name and file name

- (a) Number of characters set for folder and file names

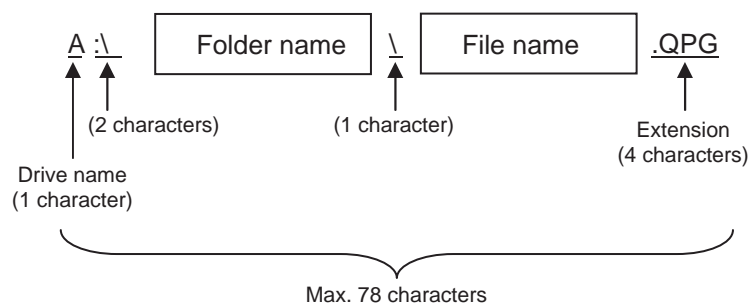
The GOT recognizes the file location with a path as shown below.

Set the folder and file names so that the total number of characters in the path is within 78 characters.

The user can set the folder name and file name only.

(Other than the folder and file names are automatically set.)

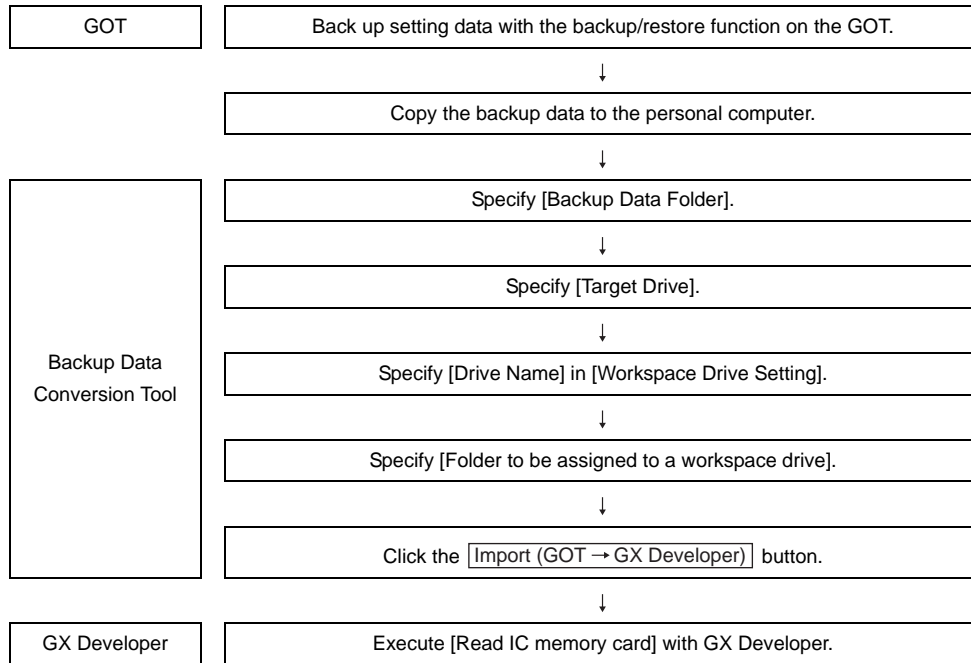
Example) Path of QPG file to be stored in CF card



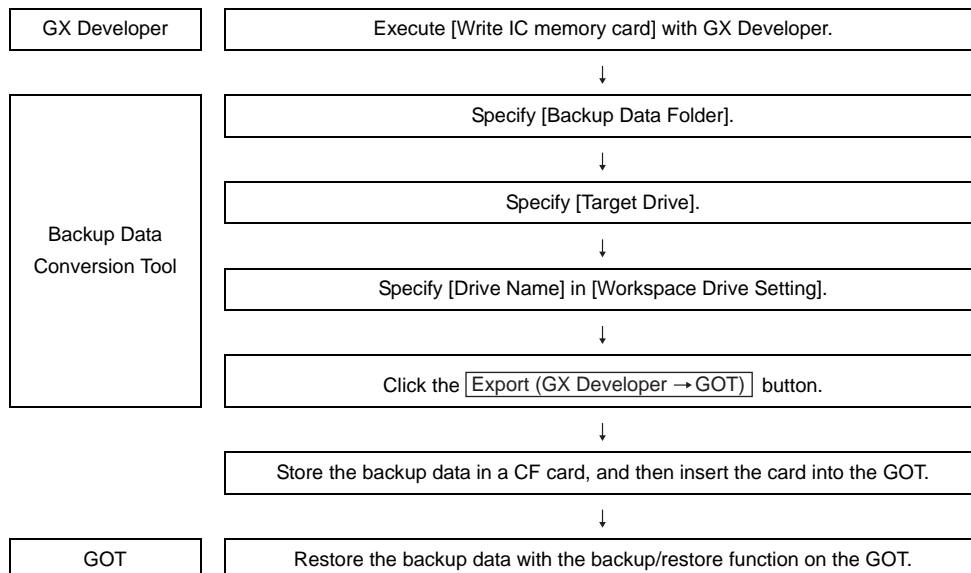
2 Operation flow

The following shows the operation flow for Backup Data Conversion Tool.

(1) Editing backup data with GX Developer



(2) Restoring data edited by GX Developer



11.6 Errors and Corrective Actions

1 Common to backup and restoration

Error	Cause	Corrective action
The backup/restore function cannot be used.	The extended function OS of the backup/restore is not installed on the GOT.	Install the extended function OS on the GOT.
The backup setting is not found.	The backup setting is not stored in the CF card or USB memory in the GOT. No CF card or USB memory is installed to the drive specified for storing the backup setting.	<ul style="list-style-type: none"> Install a CF card or USB memory with the backup setting stored. Check the storage location for the backup setting with the utility.
The backup data are not found.	The backup data are not stored in the CF card or USB memory in the GOT. No CF card or USB memory is installed to the drive specified for storing the backup data.	<ul style="list-style-type: none"> Install a CF card or USB memory with the backup data stored. Check the storage location for the backup data with the utility.
The backup/restore cannot be executed because the user does not know the password for the backup/restore.	The user does not remember the password. The password is incorrect.	<ul style="list-style-type: none"> Check with the administrator of the system regarding the password for the backup/restore. Execute the backup again by using a formatted or new CF card or USB memory.
The backup/restore cannot be completed because a communication error occurs between the GOT and a controller during the backup/restore.	The communication settings and communication driver for the GOT are incorrectly set.	Check if the communication settings and communication driver for the GOT are correctly set.
	Because parameters for the controller are incorrectly set, the controller does not recognize the GOT.	Check if the parameters for the controller is correctly set with tools, including GX Developer, for the controller.
	The controller is turned off.	Turn on the controller.
	The cable is not correctly connected.	Check the cable.

2 Backup

Error	Cause	Corrective action
The backup data cannot be written into a CF card or USB memory.	No CF card or USB memory is installed to the GOT.	Install a CF card or USB memory to the drive specified for storing the backup setting or backup data.
	The CF card or USB memory does not have free space.	Install a CF card or USB memory with enough free space. Delete unnecessary files in the CF card or USB memory.
	The CF card or USB memory is set to write-protect.	Set the CF card or USB memory to writable. The attributes of backup data files stored in the CF card or USB memory cannot be changed with the GOT. Set the files to writable with a personal computer.
	The drive does not exist.	Check if the drive specified for storing the backup setting or backup data exists. (Check if the CF card unit is installed on the GOT.)
Setting data (files and data) cannot be obtained from the controller.	The GOT cannot communicate with the controller.	Check the following. GOT <ul style="list-style-type: none"> • Check if the cable is correctly connected to the GOT. • Check if the correct communication driver is installed on the GOT. • Check if the communication settings are correctly set. Controller <ul style="list-style-type: none"> • Check if the parameters are set. • Check if the cable is correctly connected to the controller. • Check if the controller is turned on.
The backup cannot be executed because passwords for files of the controller are set.	<ul style="list-style-type: none"> • The user does not remember the password. The password is incorrect. (The first backup) • Passwords for files of the controller are changed. 	Check with the administrator of the system regarding the passwords for files of the controller.

3 Restoration

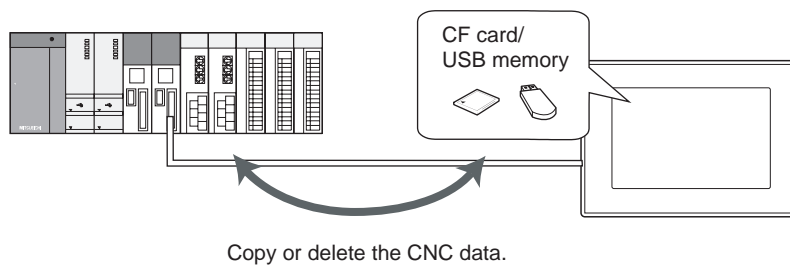
Error	Cause	Corrective action
Setting data (files and data) cannot be written into the controller.	The GOT cannot communicate with the controller.	Check the following. GOT <ul style="list-style-type: none"> • Check if the cable is correctly connected to the GOT. • Check if the correct communication driver is installed on the GOT. • Check if the communication settings are correctly set. Controller <ul style="list-style-type: none"> • Check if the parameters are set. • Check if the cable is correctly connected to the controller. • Check if the controller is turned on.
	The target controller of the restoration is a different kind of controller from the target controller of the backup.	<ul style="list-style-type: none"> • Check if the system configuration for the restoration is the same as that for the backup. • Check if the target controller of the restoration is the same as that of the backup or the same kind of controller.
The restoration cannot be executed because passwords for files of the controller are set.	<ul style="list-style-type: none"> • The passwords for files written in the controller are changed. 	Check with the administrator of the system regarding the passwords for files of the controller.

12. CNC DATA I/O



12.1 Features

Machining programs, parameters, and others of the CNC connected to the GOT can be copied or deleted.



12.2 Specifications

12.2.1 System configuration

This section describes the target CNC of the CNC data I/O and the connection types for connecting the GOT to the CNC.

For connection type settings and precautions regarding the communication unit/cable and connection type, see the following manual.

 GOT1000 Series Connection Manual

1 Target CNC of CNC data I/O

CNC
CNC C70

2 Connection type

(○: Available, ×: Unavailable)

Function		Connection type between GOT and CNC						
Name	Description	Bus connection	Direct connection	Computer link connection	Ethernet connection	MELSECNET/10 connection	CC-Link connection	
							ID ^{*1}	G4 ^{*2}
CNC data I/O	Data I/O between the CNC and GOT	○	×	×	○ ^{*3}	×	×	×

*1 Indicates CC-Link connection (Intelligent device station).

*2 Indicates CC-Link connection (via G4).

*3 Applicable only with the Display I/F connection.

3 Required extended function OS


The following extended function OS is required.

Extended function OS	OS memory space (user area)			Option function board
	GT16		GT15	
	Built-in flash memory (ROM)	User memory (RAM)		
CNC Data I/O	210KB	383KB	437KB	Not required
GOT Platform Library	77KB	200KB	100KB	

(1) Extended function OS

Install the extended function OS shown in the above table on the GOT.


For how to install the OS, refer to the following manual.

 GT Designer2 Version Basic Operation/Data Transfer Manual (Chapter 8. TRANSFERRING DATA)

(2) OS memory space

For installing the extended function OS, the available space shown in the above table is required in the user area.

For checking the available space in the user area and the data that uses other user areas, refer to the following manual.

 GT Designer2 Version Basic Operation/Data Transfer Manual (Chapter 8. TRANSFERRING DATA)

4 Required hardware

The following hardware is required.

GOT	Hardware
GT16	CF card/USB memory
GT15	CF card

5 CNC data that can be input and output

The following data can be input and output with the CNC data I/O function.

For details of the data, refer to the manual for the CNC to be used. .

Description		
Machining program, Common variable,	Parameter, Workpiece offset data,	Tool offset data, Maintenance data

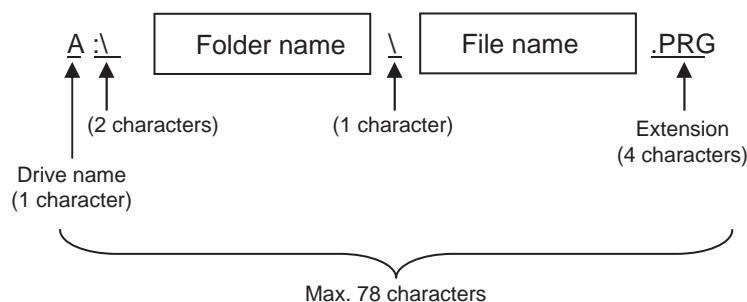
12.2.2 Access range

- (1) Bus connection
One GOT can execute the CNC data I/O on up to two CNCs by switching the CNCs.
- (2) Ethernet connection
One GOT can execute the CNC data I/O on up to 64 CNCs by switching the CNCs.

12.2.3 Precautions

- (1) Before using CNC data I/O
Read the manual of the connected CNC carefully and make sure you understand the contents before using the CNC data I/O.
- (2) GOT to be used
The CNC data I/O cannot be used with the GT1575-V, GT1575-VN, GT1572-VN, GT156□, and GT155□.
- (3) Folder name and file name
 - (a) Number of characters set for folder and file names
The GOT recognizes the file location with a path as shown below.
Set the folder and file names so that the total number of characters in the path is within 78 characters.
The user can set the folder name and file name only.
(Other than the folder and file names are automatically set.)

Example) Path of file to be stored in CF card



Remark

When setting hierarchy to folder

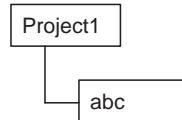
For setting [Folder Name], enter \ between folder names.

(\ is counted as one character.)

The maximum number of hierarchy levels for creating folders is 20.

(Setting example)

[Folder Name] : Project1 \ abc



(b) Character strings that cannot be set

The following character strings cannot be used in a folder name and a file name.

(The character strings cannot be used irrespective of capital or small letters.)

- COM1 to COM9 ▪ LPT1 to LPT9 ▪ AUX ▪ CON
- NUL ▪ PRN ▪ CLOCK\$

The following folder names and file names also cannot be used.

- Folder names starting with G1
- Folder and file names starting with a period or \
- Folder and file names ending with a period or \
- Folder and file names with a period or two periods only

(4) Protect for data I/O

When the data protection key 1,2, or 3 and edit lock B or C is set, the data I/O is restricted.

For the data protection key 1, 2, 3 and edit lock B, C, refer to the following manual.

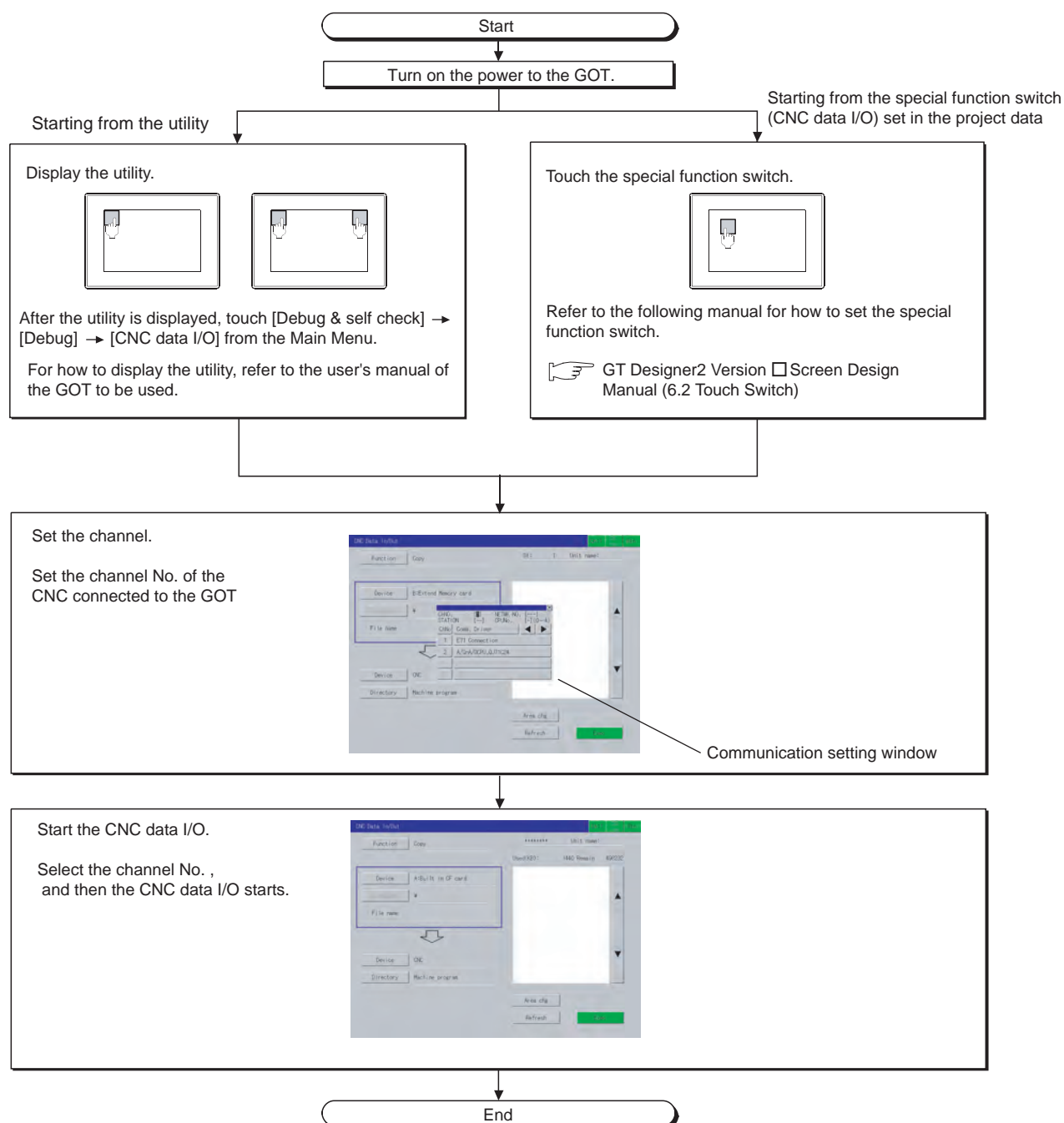


Manual for CNC to be used

12.3 Display

1 Display operations

The following describes the outline for displaying the operation screen for the CNC data I/O after installing CNC Data I/O and GOT Platform Library (extended function OS) on the GOT.



(1) How to display the utility

For how to display the utility, refer to the following.



GT16 User's manual (8.3 Utility Display)

GT15 User's manual (9.3 Utility Display)

(2) Displaying communication setting window

After turning on the GOT, the communication setting window is displayed at the first startup of the CNC data I/O only.

For displaying the communication setting window at the second or later startup, touch the **Ch:** button on the CNC data I/O screen.



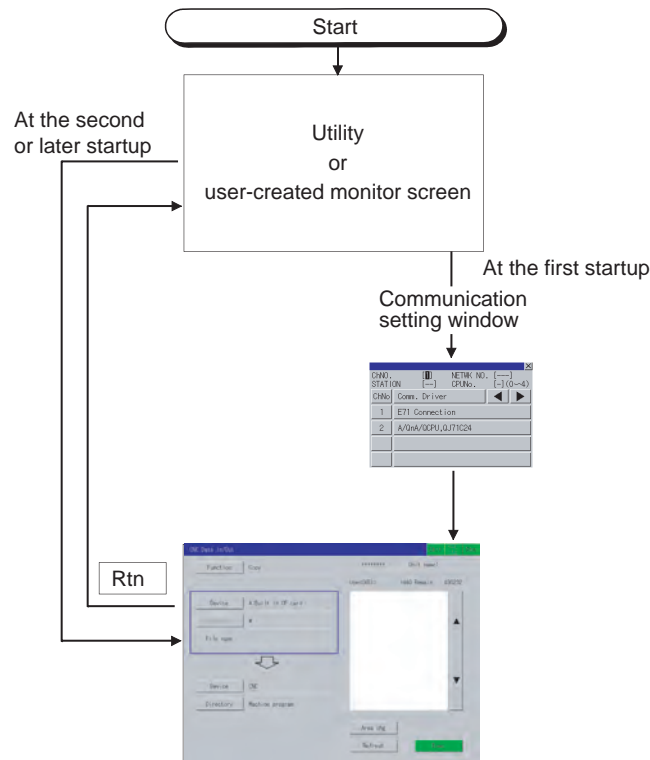
12.4 Operation Procedures)

(3) If the project data has not been downloaded

The CNC data I/O can be started from the utility even if the project data has not been downloaded to the GOT.

2 Changing screens

The following describes how to change the screen.

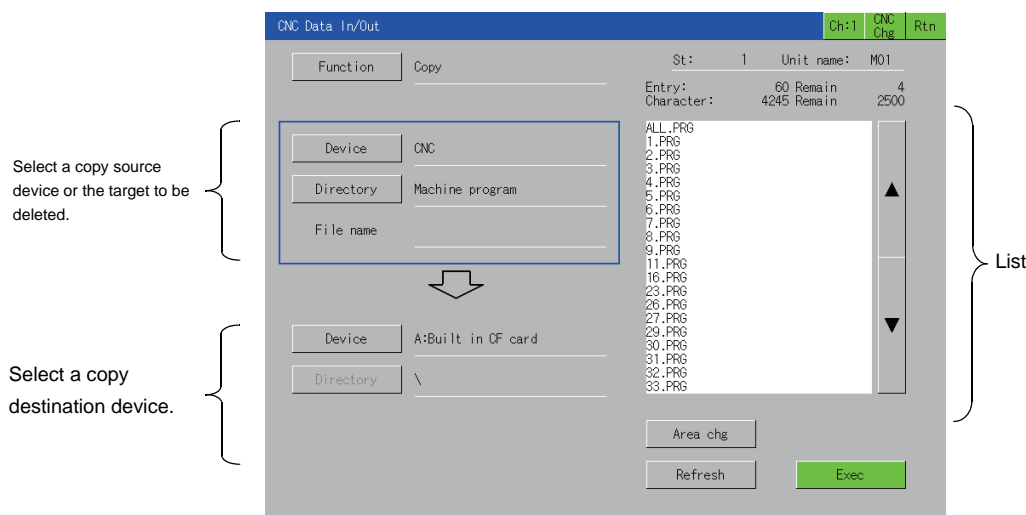


For exiting the CNC data I/O by touching **Rtn**, the last exited screen is displayed when the CNC data I/O starts next time.



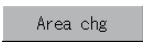


12.4 Operation Procedures

1 Displayed contents

This section describes the display details for the CNC data I/O and the functions of the keys displayed on the screen.



Item	Description
Ch:1	Displays the communication setting window.
CNC Chg	<ul style="list-style-type: none"> For bus connection Switches CNCs to be monitored when multiple CNCs are connected. The monitoring target is switched in order of the module number. For Ethernet connection Switches CNCs to be monitored when multiple CNCs are connected. The monitoring target is switched in order of the setting for the Ethernet on GT Designer2.
Rtn	Ends the CNC data I/O, and then the screen is returned to the monitor screen or the screen for the utility of the GOT.
Function	<p>Displays the function selection window.</p> <p>Select a function to be executed ([Copy]/[Delete]/[USB Drive Stop]*1).</p> <ul style="list-style-type: none"> For [Copy] or [Delete] After selecting a function, the selected function is displayed. For [USB Drive Stop]*1 The window for confirming to stop the USB drive is displayed.
Device	<p>Displays the device selection window.</p> <p>Select the target of [Function] ([CNC]/[E:USB Drive]*1/[B:Extend Memory card]/[A:Built in CF card]).</p> <p>After selecting the target, the selected target is displayed.</p>
Directory	<p>The settings and display details differ depending on the setting for [Device].</p> <ul style="list-style-type: none"> For [CNC] Displays the CNC data selection window. Select a CNC data that [Function] is executed. After selecting a CNC data, the selected CNC data is displayed. For [E:USB Drive]*1, [B:Extend Memory card], or [A:Built in CF card] Displays the directory selected in the list. (The [Directory] button cannot be touched.) Up to 28 characters are displayed as the directory.
File name	Displays the file name selected in the list.

Item	Description
Above the list	<p>The display details differ depending on the setting for [Device].</p> <ul style="list-style-type: none"> For [CNC] [Entry], [Remain]: Displays the number of programs registered and the number of registerable programs left as user-created machining programs. [Character], [Remain]: Displays the number of characters registered and the number of registerable characters left as user-created machining programs. The number of registerable characters left is displayed by 250 characters. For [E:USB Drive]*1, [B:Extend Memory card], or [A:Built in CF card] [Used(KB)], [Remain]: Displays the used space and available space of the memory card.
List	<p>Displays the data in the target selected for [Device].</p> <p>When [E:USB Drive]*1, [B:Extend Memory card], or [A:Built in CF card] is selected, the directory is displayed as < >. Touching < > displays the data in the directory. (Touching <..> displays the upper directory.)</p> <p>The copy source device is set to [E:USB Drive]*1, [B:Extend Memory card], or [A:Built in CF card], the directory for the file is displayed in the directory field of the copy destination device (CNC).</p>
	Scrolls the list up by one page.
	Scrolls the list down by one page.
	Switches the setting targets (blue frame in the left side of the screen) up and down. When [Function] is selected for [Delete], the setting targets cannot be switched.
	Updates the list.
	Executes the settings.

*1 The USB drive is applicable to GT16 only.

2 Display details in list

The following shows file names to be displayed in the list on the CNC data I/O screen.

Target data	Description	File name to be displayed in list
Machining program*1	Machining program	ALL.PRg, O_PRg
Parameter	Parameter	ALL.PRM
Tool offset data	Tool offset data	TOOL.OFS
Workpiece offset data	Workpiece offset data	WORK.OFS
Common variable	Common variable	COMMON.VAR
Maintenance data	CNC ladder	USERPLC.LAD
	R resister data	RREG.REG
	C resister data	CREG.REG
	T resister data	TREG.REG
	Operation history data	TRACE.TRC
	CNC sampling data	NCSAMP.CSV
	SRAM data files	SRAM.BIN

*1 When the base specifications parameter of #1166 fixpro is set to 1, the fixed cycle program is the target data.
When the CNC has machining programs, ALL.PRg is displayed at the top of the list.

12.5 Error Messages and Corrective Actions

The following shows the error messages for the CNC data I/O and the corrective actions.

Error message	Error	Corrective action
Communication error	The GOT fails to communicate with the CNC.	Set the correct connection and settings.
Memory Card not exist	No USB memory, extended memory card, or CF card is inserted into the GOT.	Check that a USB memory, extended memory card, or CF card is inserted into the GOT.
Failed to stop USB drive	The GOT fails to stop the USB drive.	Check the USB memory.
Unable to exec : PLC built in CNC running	The PLC CPU built in the CNC is in operation.	Stop the operation of the PLC CPU built in the CNC, and then execute the CNC data I/O again.
Unable to exec : Program running	The GOT cannot execute the CNC data I/O because the CNC is in operation.	Stop the CNC operation, and then execute the CNC data I/O again.
Out of memory	The capacity of the data to be written exceeds the CNC memory capacity.	Make enough space in the CNC memory by operations, including deleting machining programs, and then execute the CNC data I/O again.
File not found	The file to be copied does not exist.	Set the correct settings, and then execute the CNC data I/O again.
Timeout	The GOT fails to communicate with the CNC.	Check the connection.
Directory illegal	The directory is invalid.	Set the correct directory settings, and then execute the CNC data I/O again.
Data protect	The data is protected.	Check if data protection keys, edit locks, and others turn on. Check if the data is a read-only data. Then, execute the CNC data I/O again.
No. of registration over	The number of registrable programs is exceeded.	Delete unnecessary machining programs, and then execute the CNC data I/O again.
File is not specified	The [Exec] button is pressed even though a file is not specified.	Specify a file, and then execute the CNC data I/O again.
Some error found in file system	Errors occur in file systems.	File system errors Format the NC memory.
Can not write file	The file cannot be written in the copy destination device.	<ul style="list-style-type: none"> Check if the copy destination device is ready for data writing. TRACE.TRC and NCSAMP.CSV cannot be copied to the CNC.
Can not read out file	The file to be copied cannot be read.	Check if the copy source device is ready for data reading.
Filename illegal	The file name is invalid.	Check the file name, and then execute the CNC data I/O again.
Program No. duplicate	The GOT tries to copy ALL.ORG to the CNC, but the machining program with the same number already exists in the CNC, so the GOT cannot execute the CNC data I/O.	Delete the machining program in the CNC, and then execute the CNC data I/O again.
Error	Other errors	Turn off the GOT and CNC. Check data in the CF card and the connection status. Then, execute the CNC data I/O again.

MEMO

[illegible]

13. SFC MONITOR



13.1 Features

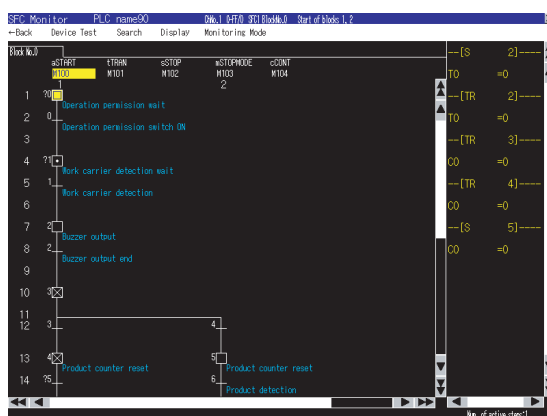
With the SFC monitor function, the GOT can monitor SFC programs of controllers, and changing device values of the programs is available.

The function improves the efficiency in troubleshooting and maintenance of PLC systems with SFC programs.

The following shows features of the SFC monitor function.

1 Displaying SFC programs in SFC diagram format

The GOT can monitor SFC programs of the PLC CPU and display the programs in the SFC diagram format (MELSAP3 or MELSAP-L format).

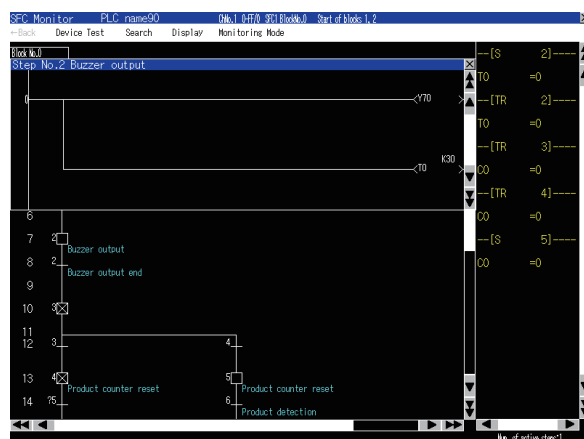


SFC diagram monitor screen

The following screens are displayed with the SFC monitor function.

- PLC read screen (13.5 How to Operate PLC Read Screen)
- Block list screen (13.6 How to Operate Block List Screen)
- SFC diagram monitor screen (13.7 How to Operate SFC Diagram Monitor Screen)

Touching a step or transition condition on the SFC diagram monitor screen displays an enlarged operation output/transition condition sequence program.



2 Switching display formats, device comment display, and languages

The following are available.

- Switching the display formats of device values
- Switching whether to display or hide device comments
- Switching languages for file names of SFC programs, comments, and others

(1) Switching display formats

On the SFC diagram monitor screen, the display formats for the current values of word devices can be switched between decimal and hexadecimal numbers.

(2) Switching device comment display

Whether to display or hide device comments used in SFC programs can be switched.

(3) Switching languages

Block titles, file titles, and comments can be displayed in the language set for the language switching in the GOT utility with comment files created with the SJIS code, KS code, and/or ASCII code.

With a CF card storing comment files created with the SJIS code, KS code, and/or ASCII code, comments can be displayed in the language corresponding to any character code in the CF card, regardless of the language set in the GOT utility.

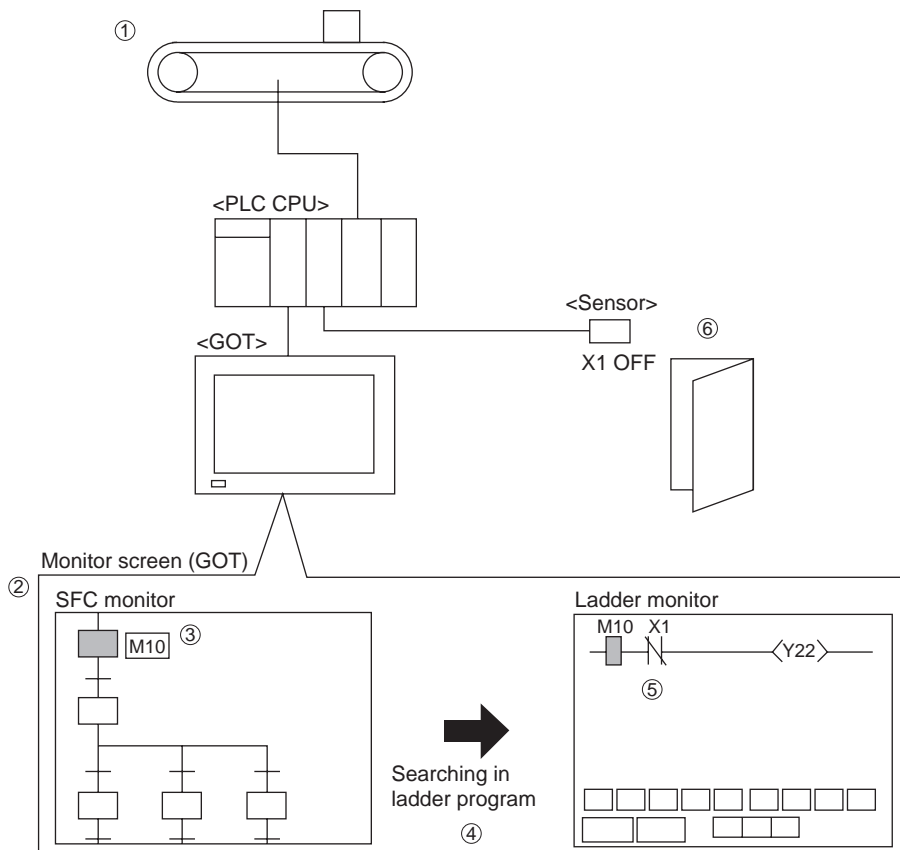
3 Interaction with ladder monitor function

By only selecting a device on the SFC diagram monitor screen and starting the ladder monitor, the GOT can search and display the device in a ladder program.

( 13.7.3 **2** Display menu)

The function is useful for searching for a device used within both a SFC program and a ladder program in the ladder program.

Example) When turning on Y22 device with ladder program including interlock circuit



- ① Finding that the machine stops
- ② Checking an active step with the SFC monitor
- ③ Checking that the machine operation command (M10) is on
- ④ Touching M10 and starting the ladder monitor
- ⑤ Finding out that Y22 (machine operation) is off because X1 is off
- ⑥ Finding out that the machine stops because the door is open (X1 is off)

13.2 Specifications

13.2.1 System configuration

This section describes the system configuration for the SFC monitor function.

For connection type settings, and precautions on the communication unit/cable and connection type, refer to the following manual.

 GOT1000 Series Connection Manual

1 Target controller

Controller
QCPU (Q mode)*1

*1 For creating a multiple CPU system with the Q00CPU, Q01CPU, Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, and/or Q25HCPU, use CPUs with the function version B or later.

2 Connection type

(○: Available, ×: Unavailable)

Function		Connection form between GOT and controller							
Name	Description	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	MELSECNET/H connection, MELSECNET/10 connection*1	CC-Link IE*2	CC-Link connection	
								ID*3	G4*4
SFC monitor	Monitors SFC programs.	○*5*6	○	○	○	○	○	○	○

*1 For the MELSECNET/10 connection, use a QCPU and network module (QJ71LP21, QJ71LP21-25, QJ71LP21S-25, and QJ71BR11) with the function version B or later.

*2 Indicates the CC-Link IE controller network connection.

*3 Indicates CC-Link connection (Intelligent device station).

*4 Indicates CC-Link connection (via G4).

*5 With the Q00JCPU, the bus extension connector box (A9GT-QCNB) can be connected to an extension base unit only. (The bus extension connector box cannot be connected to a main base unit.)

*6 The Q12PRHCPU and Q25PRHCPU are not available.

3 Required extended function OS, option OS, and option function board

The following extended function OS, option OS, and option function board are required.

Category	Option OS	OS memory space (user area)			Option function board	
		GT16		GT15	GT16	GT15
		Built-in flash memory (ROM)	User memory (RAM)			
Extended function OS ^{*1}	GOT Platform Library	77KB	200KB	100KB	Not required	GT15-QFNB16M, GT15-QFNB32M, GT15-QFNB48M, GT15-MESB48M
Option OS ^{*1}	SFC Monitor	608KB	1940KB	1373KB		
	GOT Function Expansion Library	4728KB	19381KB	4728KB		

*1 For using the SFC monitor function, a capacity of 6201KB or more is required in the user area of the specified drive for installing the extended function OS and option OS. (For using the GOT with the built-in flash memory of 5MB, set the OS boot drive to [A: Standard CF Card].)

For operating GOT Function Expansion Library (option OS), a capacity of 8192KB is required in the user area of the GOT memory. (A total memory capacity of 14393KB is required for using the SFC monitor function.)

Therefore, the following settings are required depending on the GOT to be used.

GOT	Required setting
GT1575-VN, GT1572-VN, GT1562-VN	<ul style="list-style-type: none"> Setting the OS boot drive to [A: Standard CF Card] Memory expansion (Installing an option function board with add-on memory)
GT15 other than the above	<ul style="list-style-type: none"> Memory expansion (Installing an option function board with add-on memory)


For setting the OS boot drive, refer to the following.

 GT Designer2 Version ☐ Basic Operation/Data Transfer Manual (Chapter 8 TRANSFERRING DATA)

(1) Extended function OS and option OS

Install the above extended OS and option OS on the GOT.


For how to install the operating systems, refer to the following manual.

 GT Designer2 Version Basic Operation/Data Transfer Manual (Chapter 8. TRANSFERRING DATA)

(2) OS memory space

For installing the extended function OS and option OS, the available space shown in the above table is required in the user area.

For checking the available space in the user area and the data that uses other user areas, refer to the following manual.

 GT Designer2 Version Basic Operation/Data Transfer Manual (Chapter 8. TRANSFERRING DATA)

(3) Option function board

(a) For GT16

No option function board is required.


(b) For GT15

Mount one of the option function boards in the above table on the GOT.

For the GOTs with a built-in option function board, refer to the following.

 1.1.2 Hardware and OS¹ required for each function

For how to mount an option function board on the GOT, refer to the following manual.

 GT15 User's Manual (8.10 Option Function Board)

4 Required hardware

The following hardware is required.

Hardware
CF card

13.2.2 Devices and range that can be monitored

(○: Possible, ×: Impossible)

Device	Device range	Program display	Device monitor display	Search operation
Input	X0 to 1FFF, DX0 to FFF	○	○	○
Output	Y0 to 1FFF, DY0 to FFF	○	○	○
Internal relay ^{*1}	M0 to 61439	○	○	○
Latch relay	L0 to 8191	○	○	○
Link relay ^{*2}	B0 to FFFF	○	○	○
Timer	T0 to 2047	○	○	○
Retentive timer	ST0 to 2047	○	○	○
Counter	C0 to 1023	○	○	○
Data register	D0 to 12287	○	○	○
Link register	W0 to 1FFF	○	○	○
Annunciator	F0 to 2047	○	○	○
Edge relay	V0 to 2047	○	×	○
File register ^{*3}	R0 to 32767	○	○	○
	ZR0 to 32767	○	○	○
	ZR32768 to 4184063	○	○	×
Extended data register	D0 to 32767	○	○	○
	D32768 to 4212223	○	○	×
Extension file register	W0 to 7FFF	○	○	○
	W8000 to 4045FFF	○	○	×
Link special relay	SB0 to 7FF	○	○	○
Link special register	SW0 to 7FF	○	○	○
Step relay	S0 to 8191, BL □ ¥S □	○	×	○
Index register ^{*4}	Z0 to 19	○ ^{*5}	○	○
Special relay	SM0 to 2047	○	○	○
Special register	SD0 to 2047	○	○	○
Function input	FX0 to F	○	×	○
Function output	FY0 to F	○	×	○
Function register	FD0 to 4	○	×	○
Link direct device	J □ □ ¥ □ □	○	×	×
Module access device	U □ □ ¥ □ □	○	×	×
	U3En □ □ ¥ □ □	○	×	×
Nesting	N0 to 14	×	×	×
Pointer	P0 to 4095	×	×	×
Interrupt pointer	I0 to 255	×	×	×
SFC block device	BL0 to 319	○	×	○
SFC transition device	TR0 to 511, BL □ ¥TR □	○	×	○
Network No. specification device	J0 to 255	○	×	×
I/O No. specification device	U0 to 1FF 3E0 to 3E3	○	×	×
Macro instruction argument device	VD0 to	×	×	×

*1 M8192 to 61439 are applicable to Universal model QCPU only.

*2 B2000 to FFFF are applicable to Universal model QCPU only.

*3 ZR1042432 to 4184063 are applicable to Universal model QCPU only.

*4 Z16 to 19 are applicable to Universal model QCPU only.

*5 When a ZZ device is used, "ZZ" can be displayed.

13.2.3 Access range

The access range is the same as the access range when the GOT is connected to a controller.
Refer to the following manual for details of the access range.

 GT Designer2 Version ☐ Screen Design Manual (2.7 Controllers that can be monitored and the Access Range)

13.2.4 Precautions

- (1) GOT to be used
The SFC monitor cannot be used with the GT1555-Q and GT1550-Q.
- (2) Precautions for operations during SFC monitor startup
Do not operate the following with the GOT during the SFC monitor startup.
Doing so may delete stored data and cause the SFC monitor to operate incorrectly.
 - Turning on or off the CF card access switch
 - Inserting or removing a CF card
- (3) Precautions for devices
 - (a) The GOT cannot search for indexing devices.
 - (b) The GOT cannot monitor local devices.
- (4) Precautions for setting [Locus] for line graphs
The SFC monitor function is not available when [Locus] is set for line graphs.
For using the SFC monitor function, do not set [Locus] for line graphs.
- (5) Precautions for file names (program names) of comment files to be read
Only files with the file names (program names) with one-byte alphanumeric characters are applicable to the GOT.
When project data are created on GX Developer, use only one-byte alphanumeric characters for file names (program names).

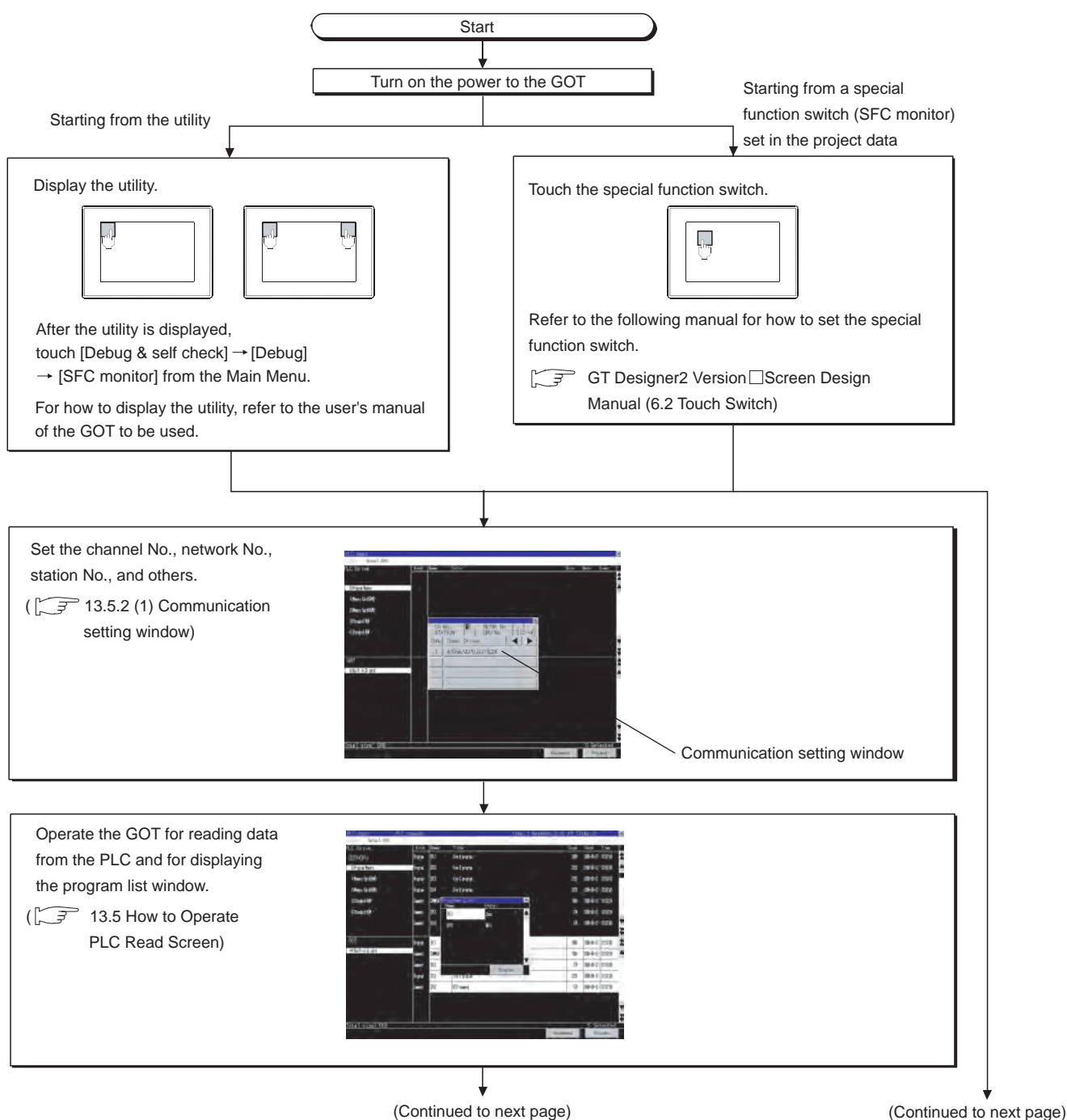
13.3 Display Operation

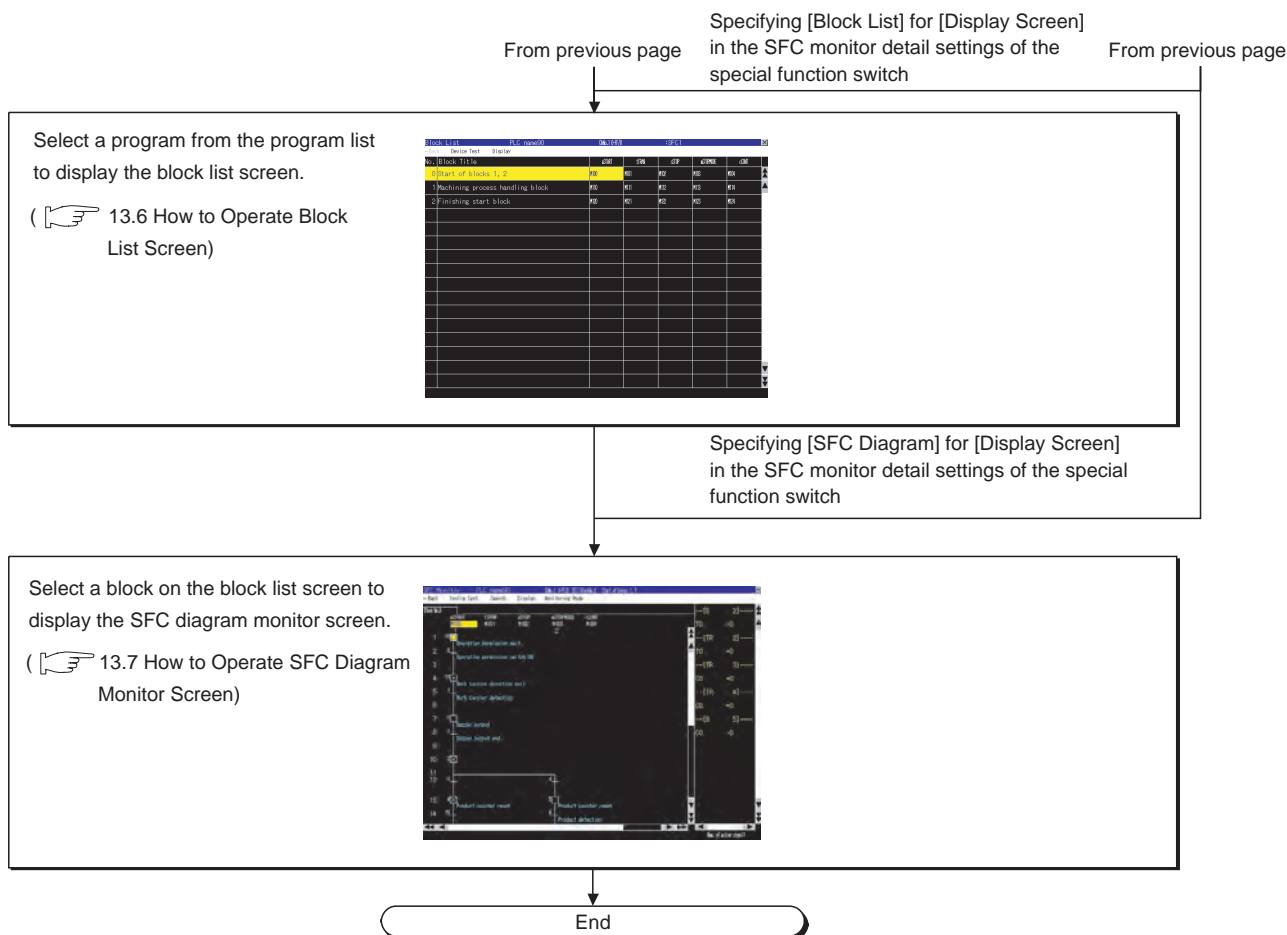
This section describes procedures for displaying the SFC monitor operation screens after turning on the GOT.

13.3.1 Outline before starting

1 Operations before displaying

The following describes the outline for displaying the SFC monitor operation screens after installing GOT Platform Library (extended function OS), SFC Monitor (option OS), and GOT Function Expansion Library (option OS) on the GOT.





Point

(1) How to display the utility

For how to display the utility, refer to the following.



GT16 User's manual (8.3 Utility Display)

GT15 User's manual (9.3 Utility Display)

(2) Reading data from PLC when reclosing GOT

Reading data from the PLC is not required when reclosing the GOT power, because SFC programs and comment files are stored in a CF card for the SFC monitor function.



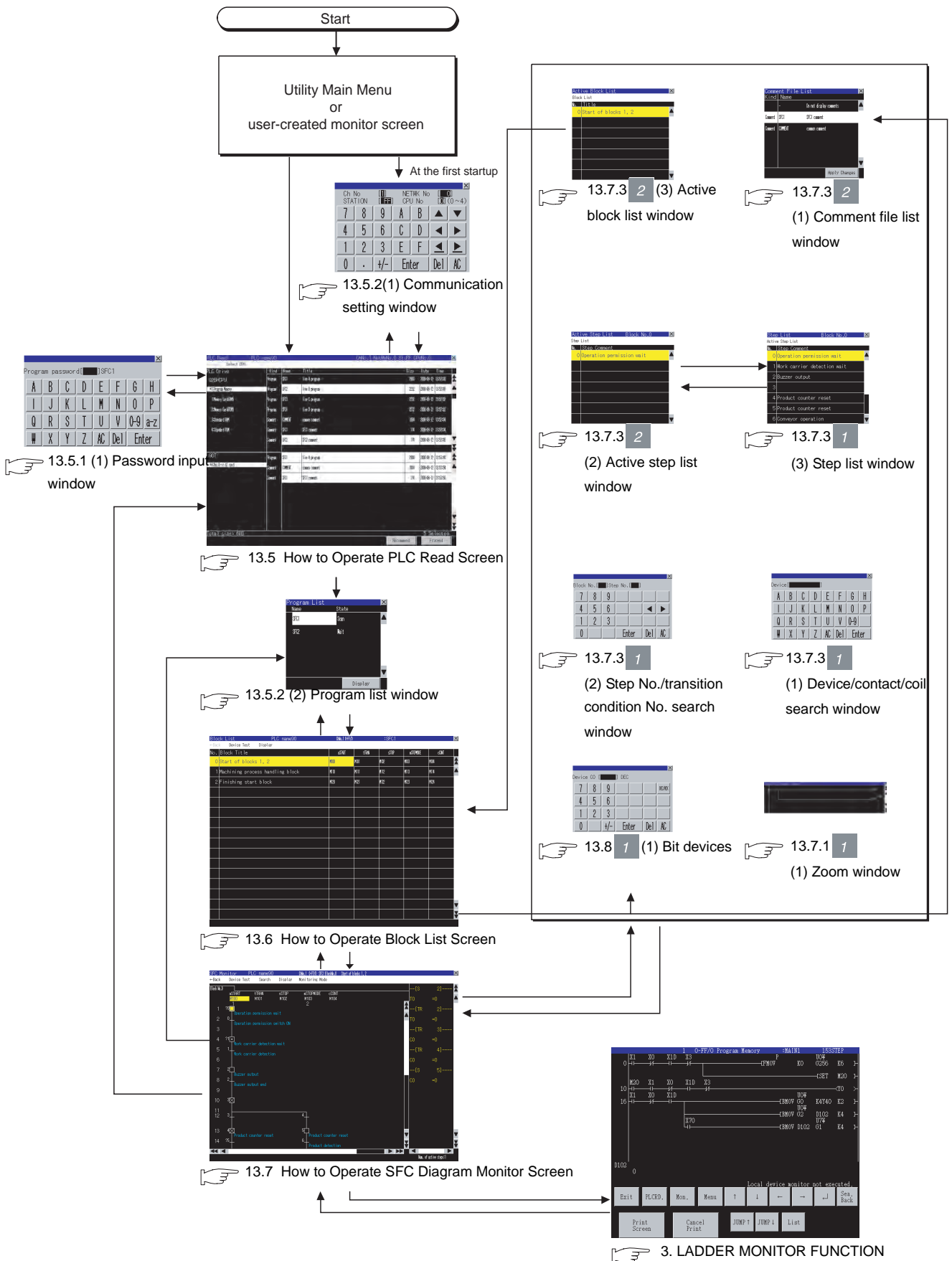
13.3.2 Setting SFC data storage location)

(3) When GOT has no project data

The SFC monitor can be started with the utility even though the GOT has no project data.

2 Changing screens

The following describes how to change the screen.



13.3.2 Setting SFC data storage location



1 Setting SFC data storage location

The selected drive of the GOT (CF card) can store up to 512 files of SFC data (SFC programs, device comments) used for the SFC monitor function.

SFC data are stored in the storage location that stores ladder data for the ladder monitor function. Only the A drive (standard CF card) or B drive (extended memory card) is available for storing SFC data.

For setting the storage location for ladder data, refer to the following manuals.

When setting with GOT utility

-  GT16 User's Manual (Section 11.2.1 Q/QnQ Ladder Monitor)
-  GT15 User's Manual (Section 11.7 Q/QnQ Ladder Monitor)

When setting with GT Designer2

-  GT Designer2 Version □ Screen Design Manual (Section 3.8 Setting of GOT Display and Operations (GOT Setup))

13.3.3 Reading comment files from CF card

The SFC monitor function uses comment files stored in a CF card installed in the GOT.

1 Procedure for using comment files stored in CF cards

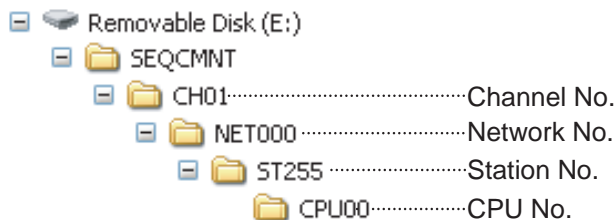
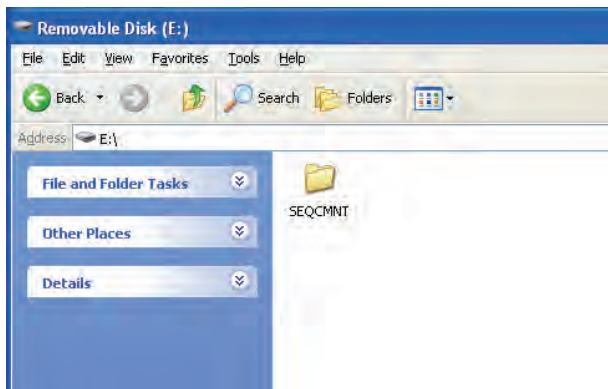
The following shows the procedure for using a comment file stored in a CF card.

- (1) When displaying comments in language set for language switching of GOT utility
Store comment files in a CF card on the PLC read screen.
For how to store comment files in a CF card on the PLC read screen, refer to the following.



13.5 How to Operate PLC Read Screen

- (2) When displaying comments in any language regardless of language set for language switching of GOT utility



- 1 Create a SEQCMNT folder in a CF card.
When the SEQCMNT folder already exists, creating a new SEQCMNT folder is not required.

- 2 In the SEQCMNT folder, create folders for CH No., network No., station No., and CPU No. of the monitored controller with a hierarchy as shown left.

Item	Folder name
CH No.	CH**
Network No.	NET***
Station No.	ST***
CPU No.	CPU**

Assign numbers to "*" marks.

(When the CH No. is 1, the folder name is CH01. When the monitor target is the host station, the folder name is ST255.)

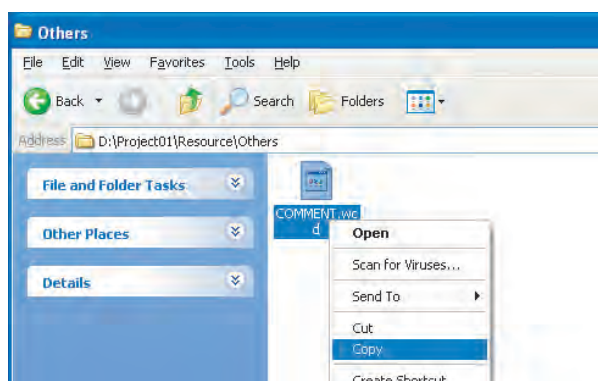
(Continued to next page)

CPU00.....	CPU No.
ASCII.....	For storing comments with ASCII code
KS.....	For storing comments with KS code
SJIS.....	For storing comments with SJIS code

- 3 In the CPU No. folder, create folders for storing comment files by character code.

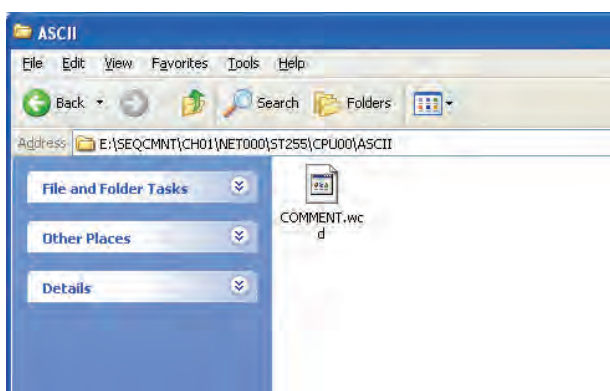
Item	Folder name
Folder for SJIS code	SJIS
Folder for KS code	KS
Folder for ASCII code	ASCII

- 4 Copy a comment file (.wcd) from the project data of GX Developer.



- 5 Store the copied comment files in the folders for each character code in the CF card.

Comment character code	Storage folder name
SJIS code	SJIS
KS code	KS
ASCII code	ASCII



(Example: Storing comment files with ASCII code in the ASCII folder.)

- 6 Install the CF card with the comment file on the GOT.

- 7 Switch comment files on the SFC diagram monitor screen for displaying the comments in an appropriate language.

13.4 Setting Display Format

The display format of word device values displayed on the SFC diagram monitor screen, language, the display mode of SFC programs, and others can be set.

13.4.1 Switching languages of SFC programs

Languages of comments to be displayed on the SFC monitor screens can be switched during monitoring. For switching languages, comment files in the language to be displayed must be created in advance.

 13.3.3 Reading comment files from CF card)

The following shows the relations between the language selected in the GOT utility and comment files with each character code.

Language	Comment file
Japanese	Comment files with SJIS code
Korean	Comment files with KS code
Other than the above	Comment files with ASCII code

13.4.2 Setting display mode of SFC programs

The display mode of SFC programs on the SFC diagram monitor screen can be set.

 13.7.3  Display menu)

The MELSAP-L program display mode is available regardless of the read SFC program format (MELSAP3, MELSAP-L).

In the MELSAP-L program display mode, operation output/transition condition sequence programs are displayed as [?????] when the GOT displays a SFC program with the MELSAP3 format.

The following shows how the GOT displays sequence programs with and without the MELSAP-L program display mode.

Item	With MELSAP-L program display mode	Without MELSAP-L program display mode
Displayed operation output/transition condition sequence program	The GOT displays a sequence program on the SFC diagram monitor screen.	The GOT displays a sequence program in the zoom window by touching a step or transition condition on the SFC diagram monitor screen.

13.4.3 Setting zoom comment display mode

Whether to display or hide comments and notes in the zoom window can be set.

 13.7.3  Monitoring Mode menu)

13.4.4 Switching display formats between decimal and hexadecimal numbers

The display formats of word device values on the SFC diagram monitor screen can be switched between decimal and hexadecimal numbers.

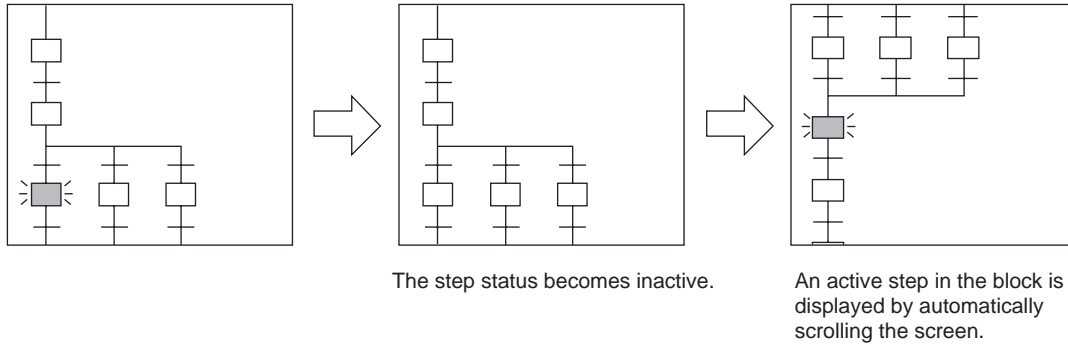
 13.7.3  Display menu)

13.4.5 Setting automatic scroll mode

The automatic scroll can be switched between enabled or disabled states.

In the automatic scroll mode, the GOT displays active steps on the SFC diagram monitor screen by automatically scrolling the screen when all the following conditions are satisfied.

- No active step is displayed on the SFC diagram monitor screen.
- The displayed block has an active step.



For setting the automatic scroll mode, refer to the following.

➞ 13.7.3 **2** Display menu

For the SFC diagram monitor screen, refer to the following.

➞ 13.7 How to Operate SFC Diagram Monitor Screen

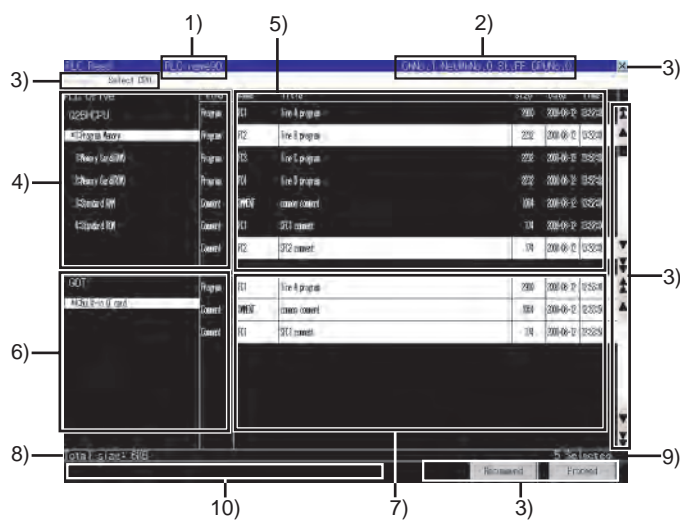
13.5 How to Operate PLC Read Screen

On the PLC read screen, the GOT reads SFC programs and comment files used for the SFC monitor function from the PLC.

The following describes how to operate the PLC read screen.

13.5.1 Displayed contents

The following describes the configuration of the PLC read screen displayed after the SFC monitor starts and key functions on the screen.



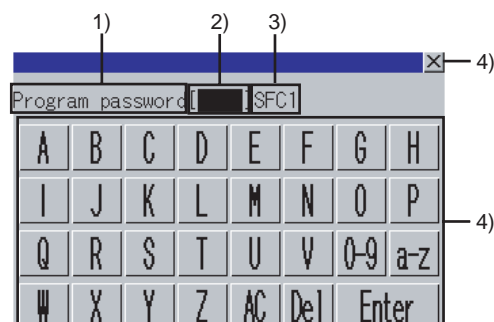
No.	Item	Description
1)	PLC name	Displays the label set in the PLC name setting for the target PLC CPU.
2)	Target controller	Displays CH No., network No., station No., and CPU No. of the target PLC CPU.
3)	Keys	Keys for operations on the PLC read screen shown in section 13.5.2. (Touch input)
4)	Target drive list (target controller)	Displays the target PLC CPU model and the drives in a list. Selecting a drive displays files within the drive in the file list (target controller). For the drive that stores files selected in the file list (target controller), [*] is displayed to the left of the drive name.
5)	File list (target controller)	Displays the program types, file names, titles, sizes, dates, and times of all the files within the drive selected in the target drive list (target controller). (The date and time show those of updated files.) A file to be read can be selected from the file list. (The selected file is highlighted.) For program files, only SFC program files in the program memory can be selected. For selecting the file name selected in the file list (GOT), the file selection in the file list (GOT) is canceled. When a password is set for the selected file, the password input window appears. (This section (1) Password input window)

(Continued to next page)

No.	Item	Description
6)	Target drive list (GOT)	Displays the drive set for [Data save location] in the MELSEC-Q/QnA ladder monitor settings. (For the SFC monitor function, only the A drive (standard CF card) or B drive (extended memory card) is available.) For the drive that stores files displayed in the file list (GOT), [*] is displayed to the left of the drive name.
7)	File list (GOT)	Displays the program types, file names, titles, sizes, dates, and times of all the files within the drive selected in the target drive list (GOT). (The date and time show those of updated files.) A file to be read can be selected from the file list. (The selected file is highlighted.) For selecting the file name selected in the file list (target controller), the file selection in the file list (target controller) is canceled.
8)	Total file size	Displays the total data size of files selected in the file list (target controller) and file list (GOT).
9)	Number of selected files	Displays the total number of files selected in the file list (target controller) and file list (GOT).
10)	Message display area	Displays error messages and others.

(1) Password input window

(a) Displayed screen



The following table shows the displayed contents.









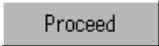

No.	Item	Description
1)	Password type	Displays the type of the password to be input. (Program password/Comment password)
2)	Password input area	Set the password.
3)	File name	Displays the file name.
4)	Keys	Keys for operations in the password input window shown in (b) (Touch input)

(b) Key functions

Key	Function
	Closes the password input window and cancels the password input operation.
	Switches the key type to the value.
	Switches the key type to the alphabet (uppercase).
	Switches the key type to the alphabet (lowercase).
	Deletes all the input values and characters.
	Deletes an input value or character.
	Verifies the password set in the password input area. When the password verification for the first file is successful, the password verification for the other files is automatically executed with the same password.

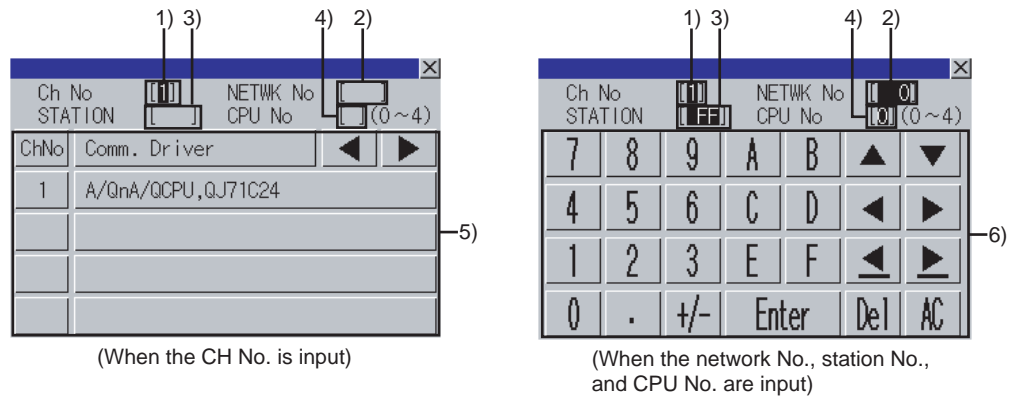
13.5.2 Key functions

The following shows the functions of the keys used for operating the PLC read screen.

Key	Function
	Returns the screen to the last screen that is displayed right before the PLC read screen appears. The key is disabled when the last screen is the GOT utility screen or user-created monitor screen.
Select CPU	Displays the communication setting window. ( 13.5.2 (1) Communication setting window)
	Exits the SFC monitor and returns the screen to the SFC monitor startup screen.
 	Scrolls the display area up and down by one line.
 	Scrolls the display area up and down by one page.
	Available only when [0:Program Memory] is selected from the target drive list (target controller). Touching the key selects all the SFC program files, common comment files, and comment files for the selected SFC program files in the file list (target controller). When files with the same name are displayed in the file list (target controller) and file list (GOT), touching the key selects a file as shown below. <ul style="list-style-type: none"> • For SFC program files <ul style="list-style-type: none"> When the updated dates and times differ between the files, touching the key selects the file in the file list (target controller). When the updated dates and times are the same between the files, touching the key selects the file in the file list (GOT). • For comment files <ul style="list-style-type: none"> When the updated dates and times differ between the files, touching the key selects the latest file. When the updated dates and times are the same between the files, touching the key selects the file in the file list (GOT).
	Writes the file selected in the file list (target controller) into the CF card displayed in the target drive list (GOT). The file written into the CF card on the PLC read screen is stored in the SEQDAT folder. After writing, among files other than comment files in the CF card, files that are not selected in the file list (GOT) are deleted. Then, the program list window appears. ( This section (2) Program list window)

(1) Communication setting window

(a) Displayed screen



The following table shows the displayed contents.

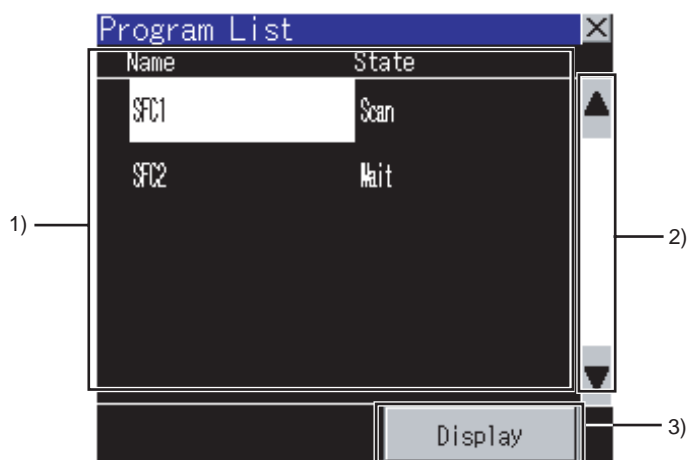
No.	Item	Description
1)	CH No. input area	Set the CH No. for the target controller.
2)	Network No. input area	Set the network No. for the target controller.
3)	Station No. input area	Set the station No. of the target controller. When the station No. is set to the host station (FF), set the network No. to 0.
4)	CPU No. input area	Set the CPU No.
5)	CH No. selection key	Select a CH No.
6)	Keys	Keys for operations in the communication setting window shown in (b). (Touch input)

(b) Key functions

Key	Function
	Closes the communication setting window. When any of the CH No., network No., station No., and CPU No. is not input and the monitor target is not set, the communication setting window does not close.
	Moves the cursor among the input areas.
	Deletes all the input values and characters.
	Deletes an input value or character.
	Moves the cursor when the cursor is in the CH No. input area, network No. input area, or station No. input area. When the cursor is in the CPU No. input area and settings for the CH No., network No., and station No. are completed, the communication setting window closes and the PLC read screen appears.

- (2) Program list window
The GOT displays the read SFC programs in a list.


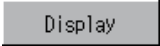

(a) Displayed screen



The following table shows the displayed contents.

No.	Item	Description
1)	SFC program file list	Displays the file names and execution statuses of the read SFC programs. The execution statuses show execution types set for the programs. A touched SFC program file is highlighted.
2)	Keys	Keys for operations in the program list window shown in (b). (Touch input)

(b) Key functions

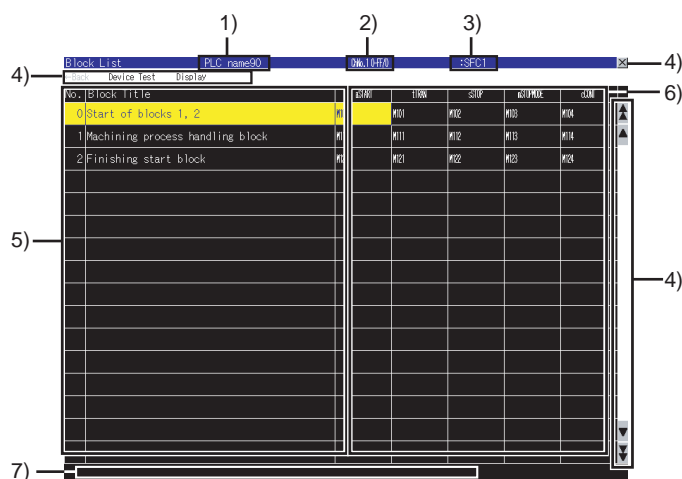
Key	Function
	Scrolls the display area up and down by one line.
	Displays the blocks of the SFC program file selected in the SFC program file list on the block list screen. ( 13.6 How to Operate Block List Screen)

13.6 How to Operate Block List Screen

On the block list screen, the GOT displays blocks within the read SFC program in a list.
The following describes how to operate the block list screen.

13.6.1 Displayed contents

The following describes the configuration of the block list screen, menus and key functions on the screen.



No.	Item	Description
1)	PLC name	Displays the label set in the PLC name setting for the target PLC CPU.
2)	Target controller	Displays the CH No., network No., station No., and CPU No of the target PLC CPU as shown below. • CH No. network No.-station No./CPU No.
3)	Program name	Displays the file name (without the extension) of the displayed program.
4)	Keys	Keys for operations on the block list screen shown in section 13.6.2. (Touch input)
5)	Block list	Displays the block numbers and block titles in the displayed program. The block numbers are not displayed with no block. Active blocks are highlighted. Selecting a block title displays the block data on the SFC diagram monitor screen. (☞ 13.7 How to Operate SFC Diagram Monitor Screen)
6)	Block information list	Displays block information for each block. When devices are set for the block information, the set devices are displayed in the corresponding cells.
7)	Message display area	Displays error messages and others.

13.6.2 Key functions

The following shows the functions of the keys used for operating the block list screen.

Key	Function
	Returns the screen to the last screen that is displayed right before the block list screen appears. The key is disabled when the last screen is the GOT utility screen or user-created monitor screen.
Device Test	Sets the device test mode. Touching the key in the device test mode cancels the device test mode. (13.8 Test Operation)
Display	Displays menus used for operations on the block list screen. (13.6.3 1 Display menu)
	Exits the SFC monitor and returns the screen to the SFC monitor startup screen.
	Scrolls the display area up and down by one line.
	Scrolls the display area up and down by one page.

13.6.3 Menus

The following shows operations for the menus displayed on the block list screen.

1 Display menu



Key	Function	Reference section
Comment Change	Displays the comment file list window.	13.7.3 2 (1)
Program List	Displays the program list window.	13.5.2 (2)
PLC Read	Displays the PLC read screen.	13.5

13.7 How to Operate SFC Diagram Monitor Screen

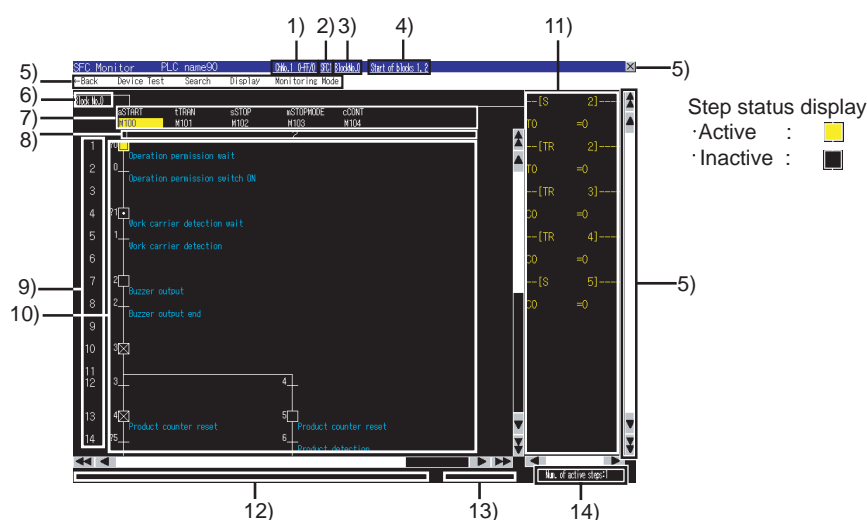
On the SFC diagram monitor screen, the GOT monitors and displays data of the block selected on the block list screen in the SFC diagram.

The following describes how to operate the SFC diagram monitor screen.

13.7.1 Displayed contents

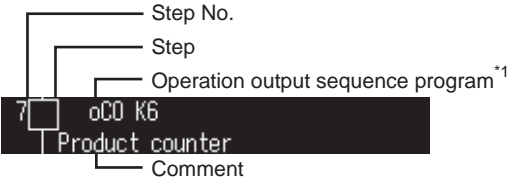
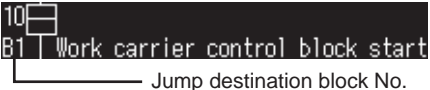

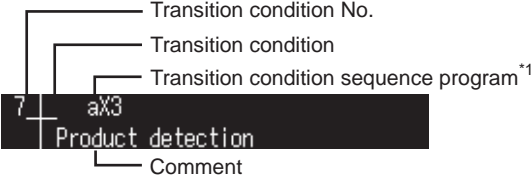



1 SFC diagram monitor screen

The following describes the configuration of the SFC diagram monitor screen, menus and key functions on the screen.



No.	Item	Description
1)	Target controller	Displays the CH No., network No., station No., and CPU No. of the target PLC CPU as shown below. • CH No. network No.-station No./CPU No.
2)	Program name	Displays the file name of the displayed program.
3)	Block No.	Displays the block No. of the displayed block.
4)	Block title	Displays the block title of the displayed block.
5)	Keys	Keys for operations on the SFC diagram monitor screen shown in section 13.7.2. (Touch input)
6)	Block switching tab	Displays the block No. of the block displayed in the SFC diagram display area. Touching a tab displays the corresponding block data in the SFC diagram display area. (Tabs displayed to the right of the touched tab are removed.)
7)	Block information display area	Displays the block information of the displayed block. When the displayed block is in any status of the block information, the corresponding device is highlighted. When the block information is set, the set devices are displayed.
8)	Column No.	Displays the column numbers.
9)	Row No.	Displays the row numbers.

(Continued to next page)

No.	Item	Description
10)	SFC diagram display area	<p>Displays a SFC program in the SFC diagram format.</p> <ul style="list-style-type: none"> Step display   <p>Touching a step displays the zoom window.  This section (1) Zoom window)</p> <p>Touching a step with a jump destination block No. displays a block switching tab, and then the jump destination block data is displayed in the SFC diagram display area.</p> <ul style="list-style-type: none"> Transition condition display  <p>Touching a transition condition displays the zoom window.  This section (1) Zoom window)</p>
11)	Device current value display area	Displays the current values of word devices displayed in the SFC diagram display area.
12)	Message display area	Displays error messages and others.
13)	Automatic scroll status display area	<p>Displays [Scrolling automatically] with the automatic scroll mode. Nothing is displayed without the automatic scroll mode.  13.4.5 Setting automatic scroll mode)</p>
14)	Number of active steps	<p>Displays the number of active steps in the displayed block. Touching the item displays the active step list window.  13.7.3 2 (2) Active step list window)</p>

*1 Operation output/transition condition sequence programs are displayed in the MELSAP-L program display mode only.

 13.7.3 2 Display menu)



Displayed contents of SFC diagram monitor screen

(1) Display mode at first display of SFC diagram monitor screen

The display mode state at the first display of the SFC diagram monitor screen differs depending on the SFC program format.

SFC program format	State at the first display
MELSAP3 format	Without MELSAP-L program display mode
MELSAP-L format	With MELSAP-L program display mode

For the display mode of SFC programs, refer to the following.

 13.4.2 Setting display mode of SFC programs

(2) Comment display at first display of SFC diagram monitor screen

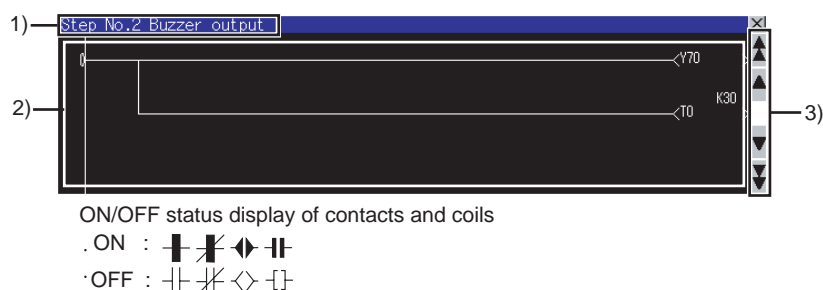
The following shows the order of comment files to be used at the first display of the SFC diagram monitor screen after reading data from the PLC. (When the CF card has no comment file, no comment is displayed.)

Priority order	Comment files used for SFC diagram monitor screen
1	Comment files by program within the SEQCMNT folder in the CF card
2	Common comment files within the SEQCMNT folder in the CF card
3	Comment files by program within the SEQDAT folder in the CF card
4	Common comment files within the SEQDAT folder in the CF card

(1) Zoom window

The GOT can display operation output/transition condition sequence programs in the ladder format.

(a) Displayed screen



The following table shows the displayed contents.

















No.	Item	Description
1)	Type	<ul style="list-style-type: none"> For displaying operation output sequence program The step number and step comment are displayed. For displaying transition condition sequence program The transition condition number and transition condition comment are displayed.
2)	Ladder program display area	Displays an operation output/transition condition sequence program. Comments and notes are displayed in the zoom comment display mode. (13.7.3 2 Display menu)
3)	Keys	Keys for operations in the zoom window shown in (b). (Touch input)

(b) Key functions

Key	Function
	Scrolls the display area up and down by one line.
	Scrolls the display area up and down by one page.

13.7.2 Key functions

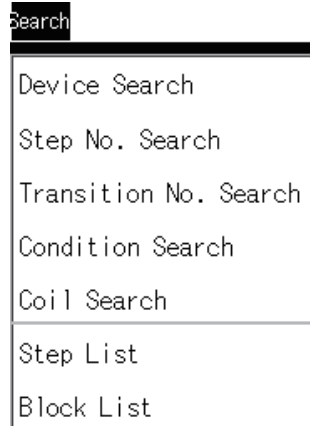
The following shows the functions of keys used for operating the SFC diagram monitor screen.

Key	Function
←Back	Returns the screen to the last screen that is displayed right before the SFC diagram monitor screen appears. The key is disabled when the last screen is the GOT utility screen or user-created monitor screen.
Device Test	Sets the device test mode. Touching the key in the device test mode cancels the device test mode. ( 13.8 Test Operation)
Search	Displays menus used for operations on the SFC diagram monitor screen. ( 13.7.3  Search menu)
Display	Displays menus used for operations on the SFC diagram monitor screen. ( 13.7.3  Display menu)
Monitoring Mode	Displays menus used for operations on the SFC diagram monitor screen. ( 13.7.3  Monitoring Mode menu)
	Exits the SFC monitor and returns the screen to the SFC monitor startup screen.
 	Scrolls the display area up and down by one line.
 	Scrolls the display area up and down by one page.
 	Scrolls the display area right and left by one column.
 	Scrolls the display area right and left by one page.

13.7.3 Menus

The following shows operations for the menus displayed on the SFC diagram monitor screen.

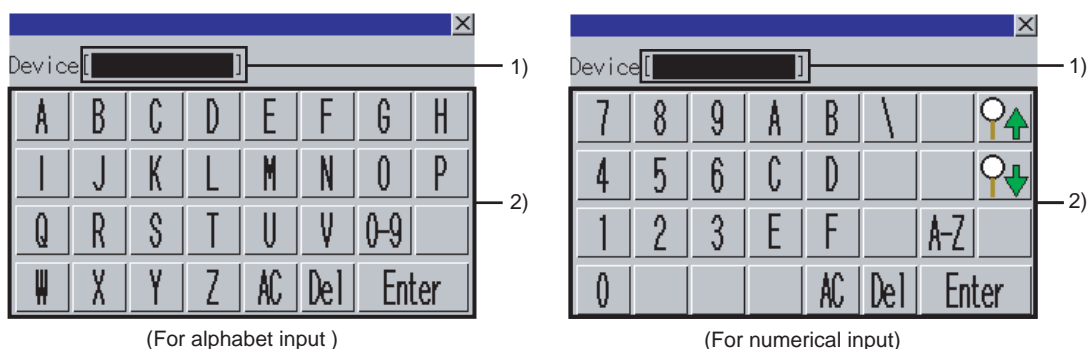
1 Search menu



Key	Function	Reference section
Device Search	Displays the device/contact/coil search window.	This section 1 (1)
Step No. Search	Displays the step No./transition condition No. search window.	This section 1 (2)
Transition No. Search	Displays the step No./transition condition No. search window.	This section 1 (2)
Condition Search	Displays the device/contact/coil search window.	This section 1 (1)
Coil Search	Displays the device/contact/coil search window.	This section 1 (1)
Step List	Displays the step list window.	This section 1 (3)
Block List	Displays the block list screen.	13.6

- (1) Device/contact/coil search window
The GOT can search for devices in a SFC program.

(a) Displayed screen



The following table shows the displayed contents.

No.	Item	Description
1)	Device input area	Set a device to be searched.
2)	Keys	Keys for operations in the device/contact/coil search window shown in (b) (Touch input)

(b) Key functions

Key	Function
	Deletes all the input values and characters.
	Deletes an input value or character.
	Switches the key type to the value.
	Switches the key type to the alphabet.
	Searches for the input device in the upward direction. When multiple blocks are set, the GOT searches for the device in descending order of the block No. When the device is found without the MELSAP-L program display mode, the GOT displays an operation output/transition condition sequence program corresponding to the step or transition condition with the device in the zoom window.
	Search for the input device in the downward direction. When multiple blocks are set, the GOT searches for the device in ascending order of the block No.
	When the device is found without the MELSAP-L program display mode, the GOT displays an operation output/transition condition sequence program corresponding to the step or transition condition with the device in the zoom window.

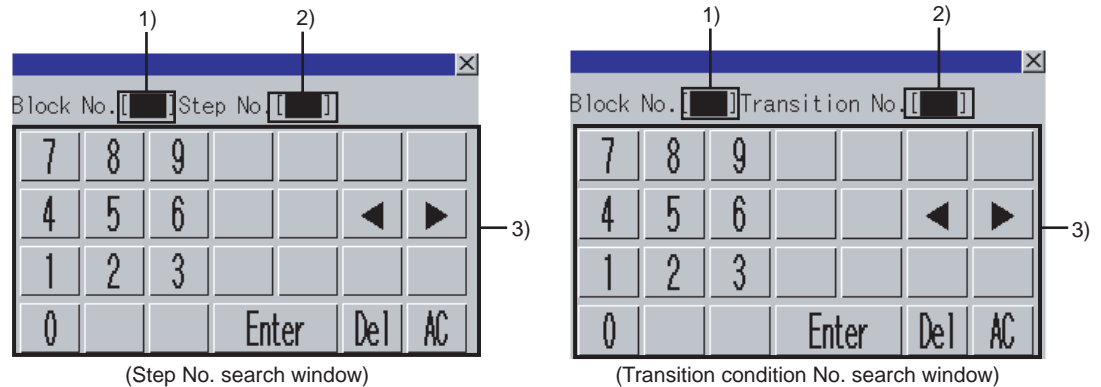
Remark

Precautions for device/contact/coil search window

- Searching for any bits in word devices is not available.
- Specify word devices for searching for any bits.

- (2) Step No./transition condition No. search window
The GOT can search for steps and transition conditions in a block.

(a) Displayed screen



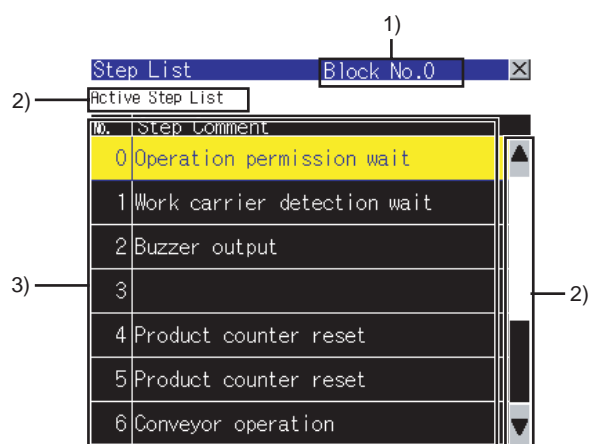
The following table shows the displayed contents.

No.	Item	Description
1)	Block No. input area	Set the block No. of the block to be searched. The GOT searches for a step or transition condition in the set block.
2)	Step No./transition condition No. input area	Set the step No. or transition condition No. of the step or transition condition to be searched.
3)	Keys	Keys for operations in the step No./transition condition No. search window shown in (b) (Touch input)

(b) Key functions

Key	Function
◀ ▶	Moves the cursor among the input areas.
Enter	<ul style="list-style-type: none"> When the cursor is in the block No. input area Moves the cursor to the step No./transition condition No. input area. When the cursor is in the step No./transition condition No. input area Searches for a step or transition condition in the set block. When the searched step or transition condition is found, the step No./transition condition No. search window closes and the GOT displays data of the step or transition condition on the SFC diagram monitor screen. (The step or transition condition is highlighted.)
Del	Deletes an input value or character.
AC	Deletes all the input values and characters.

- (3) Step list window
The GOT displays steps in a block.
- (a) Displayed screen



The following table shows the displayed contents.

No.	Item	Description
1)	Block No.	Displays the block No. of the displayed block.
2)	Keys	Keys for operations in the step list window shown in (b) (Touch input)
3)	Step list	Displays the step numbers and step comments of the steps in the displayed block. Selecting a step searches for the step, and the GOT displays the step data on the SFC diagram monitor screen. (Active steps are highlighted.)

(b) Key functions

Key	Function
Active Step List	Displays the active step list window. (This section (2) Active step list window)
	Scrolls the display area up and down by one line.

2 Display menu

Display
MELSAP-L Program Display
Comment Display in Zoom Window
Comment Change
Automatic Scroll
Active Step List
Active Block List
Program List
PLC Read
Ladder Monitor

Key	Function	Reference section
MELSAP-L Program Display	Sets the MELSAP-L program display mode. Touching the key in the MELSAP-L program display mode cancels the MELSAP-L program display mode.	13.4.2
Comment Display in Zoom Window	Sets the zoom comment display mode. Touching the key in the zoom comment display mode cancels the zoom comment display mode.	13.4.3
Comment Change	Displays the comment file list window.	This section 2 (1)
Automatic Scroll	Sets the automatic scroll mode. Touching the key in the automatic scroll mode cancels the automatic scroll mode.	13.4.5
Active Step List	Displays the active step list window.	This section 2 (2)
Active Block List	Displays the active block list window.	This section 1 (3)
Program List	Displays the program list window.	13.5.2 (2)
PLC Read	Displays the PLC read screen.	13.5
Ladder Monitor	Starts the ladder monitor. Touching the key with a device selected can automatically search for the device with the ladder monitor.*1	Chapter 3


*1 For the automatic search with the ladder monitor, settings for automatically reading sequence programs are required.

For settings for automatically reading sequence programs, refer to the following.

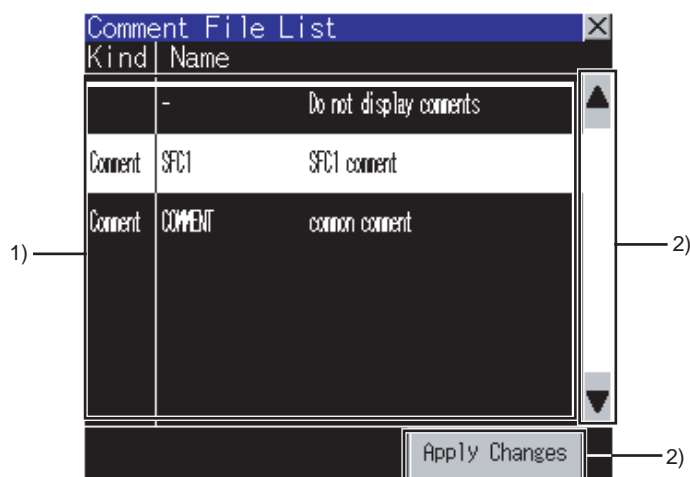
When setting with GOT utility

 GT15 User's Manual (Section 11.7 Q/QnA Ladder Monitor)

When setting with GT Designer2

 GT Designer2 Version ☐ Screen Design Manual (Section 3.8 Setting of GOT Display and Operations (GOT Setup))



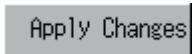
- (1) Comment file list window
The GOT displays the comment file list.
- (a) Displayed screen



The following table shows the displayed contents.

No.	Item	Description
1)	Comment file list	Among comment files stored in the CF card, the file names and titles of the comment files and common comment files used for the displayed SFC program are displayed. For switching comments, select a comment file to be used. For hiding comments, select [Do not display comments]. A selected comment file is highlighted.
2)	Keys	Keys for operations in the comment file list window shown in (b) (Touch input)

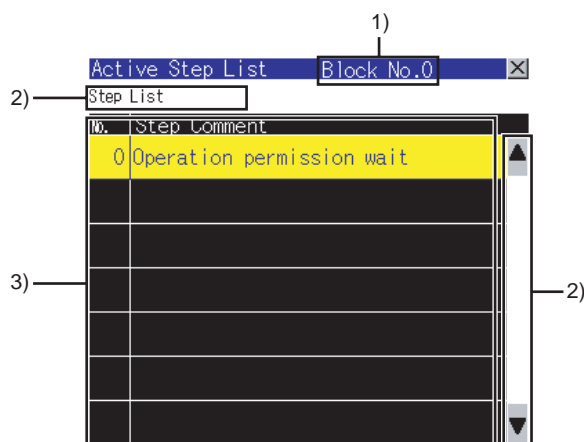
(b) Key functions

Key	Function
 	Scrolls the display area up and down by one line.
	Closes the comment file list window and displays the SFC diagram monitor screen with the comments of the file selected from the comment file list.

(2) Active step list window

The GOT displays active steps in the displayed block.

(a) Displayed screen



The following table shows the displayed contents.

No.	Item	Description
1)	Block No.	Displays the block No. of the displayed block.
2)	Keys	Keys for operations in the active step list window shown in (b) (Touch input)
3)	Active step list	Displays the step numbers and step comments of the active steps in the displayed block. Selecting a step searches for the step, and the GOT displays the step data on the SFC diagram monitor screen.

(b) Key functions

Key	Function
Step List	Displays the step list window. (This section 1 (3) Step list window)
	Scrolls the display area up and down by one line.

Point

Precautions for active step list window

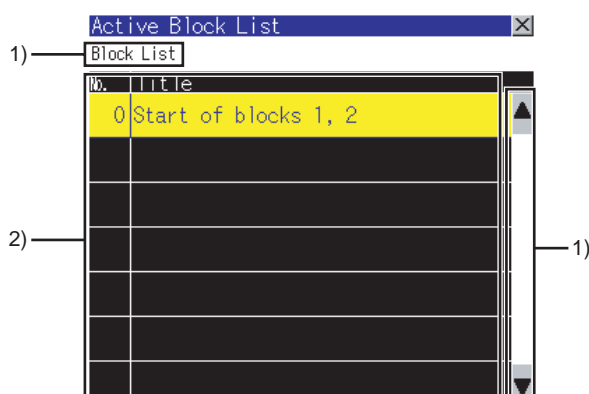
When the statuses of steps change, the displayed contents of the active step list in the active step list window change. Therefore, selecting a step may be difficult depending on the frequency of the step status change.

When selecting a step is difficult, select a step from the step list in the step list window.

This section 1 (3) Step list window

- (3) Active block list window
The GOT displays active blocks in the read SFC program.

(a) Displayed screen



The following table shows the displayed contents.

No.	Item	Description
1)	Keys	Keys for operations in the active block list window shown in (b) (Touch input)
2)	Active block list	Displays the block numbers and block titles of active blocks in the read SFC program. Selecting a block displays the block data on the SFC diagram monitor screen.

(b) Key functions

Key	Function
Block List	Displays the block list screen. (13.6 How to Operate Block List Screen)
	Scrolls the display area up and down by one line.

Point

Precautions for active block list window

When the statuses of blocks change, the displayed contents of the active block list in the active block list window change. Therefore, selecting a block may be difficult depending on the frequency of the block status change.

When selecting a block is difficult, select a block from the block list on the block list screen.

13.6 How to Operate Block List Screen

3 Monitoring Mode menu

Monitoring Mode
16-bit integer (DEC)
16-bit integer (HEX)
32-bit integer (DEC)
32-bit integer (HEX)
32-bit real number

Key	Function	Reference section
16-bit integer (DEC)	Displays the device values in the device current value display area as 16-bit decimal numbers.	13.4.4
16-bit integer (HEX)	Displays the device values in the device current value display area as 16-bit hexadecimal numbers.	13.4.4
32-bit integer (DEC)	Displays the device values in the device current value display area as 32-bit decimal numbers.	13.4.4
32-bit integer (HEX)	Displays the device values in the device current value display area as 32-bit hexadecimal numbers.	13.4.4
32-bit real number	Displays the device values in the device current value display area as 32-bit floating-point numbers with the exponential representation.	13.4.4

13.8 Test Operation

In the device test mode of the SFC monitor, device values can be changed on the screen.
For setting the device test mode, refer to the following.

- 13.6.2 Key functions
- 13.7.2 Key functions

The test operation of devices is available by touching devices on the following screens in the device test mode.

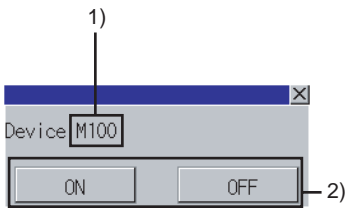
Screen applicable to device test mode	Reference section
Block information list on the block list screen	13.6.1
SFC diagram display area on the SFC diagram monitor screen	13.7.1 1
Device current value display area on the SFC diagram monitor screen	
Ladder program display area in the zoom window	13.7.1 1 (1)

Touching a device displays the device test window.

- (1) When touching bit devices
A bit device is switched between ON and OFF states in the device test window.
- (2) When touching word devices
The GOT writes the value input in the device test window into the selected word device.

1 How to operate device test window

- (1) Bit devices
 - (a) Displayed screen



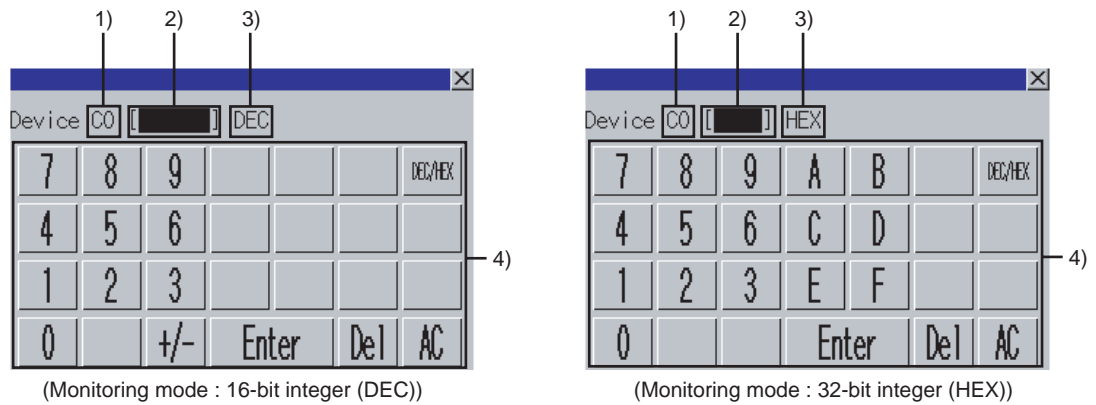
The following table shows the displayed contents.

No.	Item	Description
1)	Device	Displays the selected device.
2)	Keys	Keys for operations in the device test window shown in (b).

- (b) Key functions

Key	Function
ON	Turns on the bit device and writes the device state to the PLC CPU.
OFF	Turns off the bit device and writes the device state to the PLC CPU.






- (2) Word devices
 (a) Displayed screen



The following table shows the displayed contents.

No.	Item	Description
1)	Device	Displays the selected device.
2)	Device value input area	Set the value to be written into the selected device.
3)	Input mode	Displays the current input mode. (DEC: decimal number. HEX: hexadecimal number)
4)	Keys	Keys for operations in the device test window shown in (b).

(b) Key functions

Key	Function
	Closes the device test window.
	Switches the input modes. (DEC, HEX)
	Writes the value input in the device value input area into the PLC CPU.
	Deletes an input value or character.
	Deletes all the input values and characters.

13.9 Error Messages and Corrective Action

The following shows the error messages for the SFC monitor and the corrective actions.

Error message	Description	Corrective action
Failed to write the value to the device.	In the device test mode, the GOT fails to write the value into the device of the PLC CPU.	(1) Check the communications between the GOT and PLC CPU, and make sure that the GOT communicates with the PLC CPU. (2) Check if the target device is writable with parameters of the target PLC CPU.
Failed to communicate with CPU.	The GOT cannot communicate with the target PLC CPU.	Check the communications between the GOT and PLC CPU, and make sure that the GOT communicates with the PLC CPU.
File access error. Confirm the CF card.	A file access error occurs.	(1) When no CF card is installed, install a CF card. (2) When the CF card access switch is off, turn on the switch. (3) Check if the CF card is formatted with FAT16. When the CF card is not formatted with FAT16, format the CF card with FAT16 and install the card in the GOT.
Failed to get the information of CPU because of bad connection.	The GOT fails to collect data from the PLC CPU.	Check the communications between the GOT and PLC CPU, and make sure that the GOT communicates with the PLC CPU.
Failed to save files because of an insufficient capacity of CF card.	The CF card has insufficient space for storing files.	(1) Delete files in the CF card. (2) Install a large capacity CF card.
The file(file name) is broken. The file is unselected.	The file read from the CF card is broken.	(1) Do not select broken files. (2) Overwrite the broken file with the unbroken file.
Failed to write (file name) to CF card.	The GOT fails to write the file into the CF card.	(1) When no CF card is installed, install a CF card. (2) When the CF card access switch is off, turn on the switch. (3) Check if folders and files within the SEQDAT folder in the CF card are writable. When the folders and files are not writable, make sure that the folders and files are writable. (4) Check if the CF card is formatted with FAT16. When the CF card is not formatted with FAT16, format the CF card with FAT16 and install the card in the GOT.
Change the Data save location of Q/QnA ladder monitor to A: or B:	The SFC monitor is started with [Data save location] is set to a drive other than [A: Built-in CF card] and [B:Memory card] in the MELSEC-Q/QnA ladder monitor setting.	Set [Data save location] to [A: Built-in CF card] or [B:Memory card] in the MELSEC-Q/QnA ladder monitor setting of the GOT utility.
The ladder block is too big to display.	The GOT cannot display a sequence program in the zoom window because the program has a ladder block with 25 or more lines.	Split the ladder block.
The specified block does not exist. Confirm the program.	The GOT cannot display the specified block data in the SFC diagram because the specified block does not exist.	Correct the program with GX Developer and operate the GOT for reading the file from the PLC.

(Continued to next page)

Error message	Description	Corrective action
The file(file name) is broken. Perform PLC Read and read the file again.	The GOT cannot display the program file data on the block list screen or SFC diagram monitor screen because the program file is broken.	Operate the GOT for reading the file from the PLC.
The device range has been changed. Please read the file again.	The GOT cannot read the target device values of the SFC monitor because the device range is changed in the PLC parameter setting during the SFC monitor.	Operate the GOT for reading the file from the PLC.
Cannot read programs other than SFC program.	The program file specified by a key on the block list screen or the SFC diagram monitor screen is not a SFC program.	Specify a SFC program by a key on the block list screen or the SFC diagram monitor screen.

APPENDICES

9

SERVO AMPLIFIER
MONITOR

10

CNC MONITOR
FUNCTION

11

BACKUP/RESTORE

12

CNC DATA I/O

13


SFC MONITOR

APPENDICES

INDEX

Appendix1 List of Functions Added by GT Designer2 Version Upgrade (For GOT1000 Series)

The following describes the functions added by version upgrade of the GT Designer2 Version2.90U. For function comparisons among GOTs, refer to the following.

 GT Designer2 Version ☐ Basic Operation/Data Transfer Manual
(App3-2 List of Differences between the GOT1000 series and GOT-900 series functions)

For using the following functions, use GT Designer2 or OS of the corresponding version or later. (Applicable OS versions and communication drivers for GT16, GT15, GT SoftGOT1000, and GT11 are different from those for GT10. The added functions for GT10 are listed separately from those for GT15, GT SoftGOT1000, and GT11.)



How to use this table

- 1** provides the versions of GT Designer2 and OS required for each GOT or communication unit.
- 2** and the following provides description for the functions added with the version upgrade, and the versions of GT Designer2 and OS with which the function is compatible.
- Regarding **2** and the following, there may be a case where the function is not supported by a particular type of GOT even when the function is compatible with the version.
In such a case, check the version for the function and the version of the GOT, and use GT Designer2 or OS of the later version.

Appendix.1.1 GT16, GT15, GT SoftGOT1000 and GT11

1 Added GOT main unit/Communication unit

Target Models	Version of GT Designer2	Version of OS
GT1695M-XTBA, GT1695M-XTBD	2.90U	Standard monitor OS [04.02.**]
GT1685M-STBA, GT1685M-STBD	2.90U	Standard monitor OS [04.02.**]
GT1595-XTBA	2.18U	Standard monitor OS [02.02.**]
GT1595-XTBD	2.32J	Standard monitor OS [03.00.**]
GT1585-STBD	2.18U	Standard monitor OS [02.02.**]
GT1585V-STBA, GT1585V-STBD	2.32J	Standard monitor OS [03.00.**]
GT1575-STBD	2.18U	Standard monitor OS [02.02.**]
GT1575V-STBA, GT1575V-STBD	2.32J	Standard monitor OS [03.00.**]
GT1575-VTBD	2.18U	Standard monitor OS [02.02.**]

(Continued to next page)

Target Models	Version of GT Designer2	Version of OS
GT1575-VNBA, GT1575-VNBD, GT1572-VNBA, GT1572-VNBD	2.18U	Standard monitor OS [02.02.**]
GT1565-VTBD	2.18U	Standard monitor OS [02.02.**]
GT1562-VNBA, GT1562-VNBD	2.18U	Standard monitor OS [02.02.**]
GT1555-VTBD	2.58L	Standard monitor OS [03.03.**]
GT1555-QTBD, GT1555-QSBD, GT1550-QLBD	2.32J	Standard monitor OS [03.00.**]
GT1155-QTBDQ, GT1155-QSBDQ, GT1155-QTBDA, GT1155-QSBDA GT1150-QLBDQ, GT1150-QLBDA	2.58L	Standard monitor OS [03.03.**]
GT1155-QTBD	2.73B	Standard monitor OS [03.09.**]
GT1155HS-QSBD to GT1150HS-QLBD	2.18U	Standard monitor OS [02.02.**]
GT SoftGOT1000	2.27D	-
GT15-QBUS(2), GT15-ABUS(2), GT15-RS2-9P, GT15-RS4-9S, GT15-RS4-TE	2.18U	Standard monitor OS [02.02.**] Communication driver For communication drivers used in each connection, use [02.02.**] or above.
GT15-J71GP23-SX	2.77F	Standard monitor OS [03.12.**]
GT16M-V4, GT16M-R2, GT16M-V4R1, GT16M-ROUT	2.90U	Extended function OS Video/RGB [04.02.**]
GT16M-MMR	2.90U	Extended function OS Multimedia [04.02.**]
GT15-CFCD	2.43V	Standard monitor OS [03.01.**] BootOS [03.01.**.M]
GT15-CFEX-C08SET	2.45X	Standard monitor OS [03.02.**]
GT15-SOUT	2.58L	Extended function OS Sound Output [03.03.**]
GT15-DIO	2.58L	Extended function OS External I/O / Operation Panel [03.03.**]
GT15-DIOR	2.90U	Extended function OS External I/O / Operation Panel [04.02.**]

2 Added connection types

(1) For GT16

Item	Description	Version of GT Designer2	Version of OS
Bus connection	Supporting connection to BUS	2.90U	Communication driver Bus(Q)[04.02.**] Bus(A/QnA) [04.02.**]
Direct connection to CPU	Supporting the direct CPU connection	2.90U	Communication driver A/QnA/Q CPU, QJ71C24 [04.02.**] MELSEC-FX [04.02.**]
Computer link connection	Supporting the computer link connection	2.90U	Communication driver A/QnA/Q CPU, QJ71C24 [04.02.**] AJ71QC24, MELDAS C6* [04.02.**] AJ71C24/UC24 [04.02.**]

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS
MELSECNET/H connection (PLC to PLC network)	Supporting connection to MELSECNET/H (PLC to PLC network)	2.90U	Communication driver MELSECNET/H [04.02.**]
MELSECNET/10 connection (PLC to PLC network)	Supporting connection to MELSECNET/10 PLC to PLC connection)	2.90U	Communication driver MELSECNET/H [04.02.**]
CC-Link IE controller network connection	Supporting connection to CC-Link IE controller network	2.90U	Communication driver CC-Link IE Controller Network [04.02.**]
CC-Link connection (Intelligence device station)	Supporting connection to CC-Link (Intelligence device station)	2.90U	Communication driver CC-Link Ver2 (ID) [04.02.**]
CC-Link connection (Via G4)	Supporting connection to CC-Link (Via G4)	2.90U	Communication driver CC-Link(G4) [04.02.**]
Ethernet connection	Supporting connection to the Ethernet	2.90U	Communication driver Ethernet(MELSEC), Q17nNC, CRnD-700 [04.02.**]
MODBUS® /TCP	Supporting connection to the MODBUS® /TCP	2.90U	Communication driver MODBUS/TCP [04.02.**]
OMRON PLC connection	Supporting connection to OMRON PLC	2.90U	Communication driver OMRON SYMAC [04.02.**]
KEYENCE PLC connection	Supporting connection to KEYENCE PLC	2.90U	Communication driver KEYENCE KV700/1000 [04.02.**]
KOYO EI PLC connection	Supporting connection to KOYO EI PLC	2.90U	Communication driver KOYO KOSTAC/DL [04.02.**]
SHARP PLC connection	Supporting connection to SHARP PLC	2.90U	Communication driver SHARP JW [04.02.**]
TOSHIBA PLC connection	Supporting connection to TOSHIBA PLC	2.90U	Communication driver TOSHIBA PROSEC T/V [04.02.**]
TOSHIBA MACHINE PLC connection	Supporting connection to TOSHIBA MACHINE PLC	2.90U	Communication driver TOSHIBA MACHINE TCmini [04.02.**]
JTEKT PLC connection	Supporting connection to JTEKT PLC	2.90U	Communication driver JTEKT TOYOPUC-PC [04.02.**]
HITACHI IES PLC connection	Supporting connection to HITACHI IES PLC	2.90U	Communication driver HITACHI HIDIC H [04.02.**] HITACHI HIDIC H (Protocol 2) [04.02.**]
HITACHI PLC connection	Supporting connection to HITACHI PLC	2.90U	Communication driver HITACHI S10mini/S10V [04.02.**]
FUJI FA PLC connection	Supporting connection to FUJI FA PLC	2.90U	Communication driver FUJI MICREX-F [04.02.**]
MATSUSHITA PLC connection	Supporting connection to MATSUSHITA PLC	2.90U	Communication driver MATSUSHITA MEWNET-FP [04.02.**]
YASKAWA PLC connection	Supporting connection to YASKAWA PLC	2.90U	Communication driver YASKAWA GL/CP9200(SH/H)/CP9300MS [04.02.**] Ethernet(YASKAWA) [04.02.**]

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS
YOKOGAWA PLC connection	Supporting connection to YOKOGAWA PLC	2.90U	Communication driver YOKOGAWA FA500/FA-M3/ STARDOM [04.02.**] Ethernet(YOKOGAWA) [04.02.**] MODBUS/TCP [04.02.**]
ALLEN-BRADLEY PLC connection	Supporting connection to ALLEN-BRADLEY PLC	2.90U	Communication driver AB SLC500, AB 1:N [04.02.**] AB MicroLogix [04.02.**] AB Control/CompactLogix [04.02.**] EtherNet/IP(AB) [04.02.**]
GE FANUC PLC connection	Supporting connection to GE FANUC PLC	2.90U	Communication driver GE Fanuc Automation(SNP-X) [04.02.**]
LS IS PLC connection	Supporting connection to LS IS PLC	2.90U	Communication driver LS Industrial Systems MASTER-K[04.02.**]
SCHNEIDER PLC connection	Supporting connection to the MODBUS® /TCP	2.90U	Communication driver MODBUS/TCP [04.02.**]
SIEMENS PLC connection	Supporting connection to SIEMENS PLC	2.90U	Communication driver SIEMENS S7-300/400 [04.02.**] SIEMENS S7-200 [04.02.**]
Microcomputer connection	Supporting connection to a microcomputer	2.90U	Communication driver Computer [04.02.**]
OMRON temperature controller connection	Supporting connection to OMRON temperature controller	2.90U	Communication driver OMRON THERMAC / INPANEL NEO [04.02.**]
SHINKO indicating controller connection	Supporting connection to SHINKO indicating controller	2.90U	Communication driver SHINKO TECHNOS CONTROLLER [04.02.**]
CHINO controller connection	Supporting connection to CHINO controller	2.90U	Communication driver CHINO Controllers(MODBUS) [04.02.**]
FUJII SYS temperature controller connection	Supporting connection to FUJII SYS temperature controller	2.90U	Communication driver FUJII PXR/PXG/PXH [04.02.**]
YAMATAKE temperature controller connection	Supporting connection to YAMATAKE temperature controller	2.90U	Communication driver YAMATAKE SDC/DMC [04.02.**]
YOKOGAWA temperature controller connection	Supporting connection to YOKOGAWA temperature controller	2.90U	Communication driver YOKOGAWA GREEN/UT100/ UT2000 [04.02.**]
RKC temperature controller connection	Supporting connection to RKC temperature controller	2.90U	Communication driver RKC SR Mini HG(MODBUS) [04.02.**]
Inverter connection	Supporting connection to inverter	2.90U	Communication driver FREQUOL 500/700 [04.02.**]
Servo amplifier connection	Supporting connection to servo amplifier	2.90U	Communication driver MELSERVO-J3, J2S/M [04.02.**]
Robot controller connection	Supporting connection to robot controller	2.90U	Communication driver QJ71E71/AJ71(Q)E71,Q17nNC, CRnD-700 [04.02.**]

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS
CNC connection (MELDAS C6/C64)	Supporting connection to CNC (MELDAS C6/C64 series)	2.90U	Communication driver AJ71QC24, MELDAS C6* [04.02.**] MELSECNET/H [04.02.**] CC-Link Ver2 (ID) [04.02.**] Ethernet(MELSEC), Q17nNC, CRnD-700 [04.02.**]
Bar code reader connection	Supporting connection to barcode reader	2.90U	Extended function OS Barcode [04.02.**]
Printer connection	Supporting connection to printer	2.27D	Extended function OS Printer [04.02.**]
FA transparent	Supporting the FA transparent function via USB	2.90U	Standard monitor OS [04.02.**]
External I/O device connection	Supporting connection to external I/O devices	2.90U	Extended function OS External I/O / Operation Panel [04.02.**]
RFID connection	Supporting connection to the RFID controller	2.90U	Extended function OS RFID [04.02.**]

(2) For GT15, GT SoftGOT1000, and GT11

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
Bus connection	Supporting connection to BUS	2.04E	Communication driver Bus(Q)[01.00.**] Bus(A/QnA) [01.00.**]	○	×	×	×
		2.58L	GT15 Communication driver Bus(Q) [03.03.**] Bus(A/QnA) [03.03.**] GT11 BootOS [03.03.**.P] Standard monitor OS [03.03.**] Communication driver Bus(Q) [03.03.**] Bus(A/QnA) [03.03.**]	○	○	○	×
	Supporting connection to Q172HCPU, Q173HCPU	2.09K	Communication driver Bus(Q) [01.02.**]	○	×	○	×
	Priority order of data load can be set.	2.43V	Communication driver Bus connection Q [03.01.**]	○	×	○	×
	Supporting connection to Universal model QCPU	2.63R	Communication driver Bus connection Q [03.07.**]	○	○	○	×
	Supporting connection to Q17nDCPU						
	Supporting connection to CNC C70						
	Supporting connection to CRnQ-700	2.73B	Communication driver Bus connection Q [03.09.**]	○	○	○	×
	Supporting connection to Q13UDHCPU and Q26UDHCPU	2.77F	Communication driver Bus connection Q [03.12.**]	○	○	○	×
	Supporting connection to Q02PHCPU and Q06PHCPU	2.82L	Communication driver Bus connection Q [03.13.**]	○	○	○	×
	Supporting connection to Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q13UDEHCPU, and Q26UDEHCPU						

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
Direct connection to CPU	Supporting connection to Q172HCPU, Q173HCPU	2.09K	Communication driver A/QnA/QCPU,QJ71C24 [01.02.**]	○	×	×	○
	Supporting connection to FX3U series	2.18U	Communication driver MELSEC-FX[02.02.**]	○	○	×	○
	Supporting automatic system switching for QCPU redundant system	2.32J	Communication driver A/QnA/QCPU, QJ71C24, MELDAS C6* [03.00.**]	○	○	×	○
	Communication driver name has been changed.	2.43V	Communication driver A/QnA/QCPU, QJ71C24 [03.01.**]	○	×	×	○
	Supporting connection to Universal model QCPU	2.63R	Communication driver A/QnA/QCPU,QJ71C24, MELDASC6*[03.07.**]	○	○	×	○
	Supporting connection to Q17nDCPU						
	Supporting connection to CNC C70						
	Supporting connection to CRnQ-700	2.73B	Communication driver A/QnA/QCPU, QJ71C24 [03.09.**]	○	○	×	○
	Supporting settings for the number of retries, the timeout time, and delay time		Communication driver A/QnA/QCPU, QJ71C24 [03.09.**] MELSEC-FX[03.09.**]	○	×	×	○
	Supporting connection to Q13UDHCPU and Q26UDHCPU	2.77F	Communication driver A/QnA/QCPU, QJ71C24 [03.12.**]	○	○	×	○
	Supporting connection to Q02PHCPU and Q06PHCPU	2.82L	Communication driver A/QnA/QCPU, QJ71C24 [03.13.**]	○	○	×	○
	Supporting connection to Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q13UDEHCPU, and Q26UDEHCPU						
	Supporting connection to QS001CPU			×	○	×	×
	Supporting connection to FX3G series	2.90U	Communication driver MELSEC-FX[04.02.**]	○	○	×	○
Computer link connection	Supporting connection to Q172HCPU, Q173HCPU	2.09K	Communication driver A/QnA/QCPU,QJ71C24 [01.02.**]	○	×	×	○
	Communication driver name has been changed.	2.43V	Communication driver A/QnA/QCPU, QJ71C24 [03.01.**] AJ71QC24, MELDAS C6* [03.01.**]	○	×	×	○
	Supporting connection to Universal model QCPU	2.63R	Communication driver A/QnA/QCPU,QJ71C24, MELDASC6*[03.07.**]	○	○	×	○
	Supporting connection to Q17nDCPU						
	Supporting connection to CNC C70						
	Supporting the redundant system with the redundant type extension base unit						

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
Computer link connection	Supporting connection to CRnQ-700	2.73B	Communication driver A/QnA/QCPU, QJ71C24 [03.09.**]	○	○	×	○
	Supporting settings for the number of retries, the timeout time, and delay time		Communication driver A/QnA/QCPU, QJ71C24 [03.09.**] AJ71QC24, MELDAS C6* [03.09.**] AJ71C24/UC24[03.09.**]	○	×	×	○
	Supporting connection to Q13UDHCPU and Q26UDHCPU		Communication driver A/QnA/QCPU, QJ71C24 [03.12.**]	○	○	×	○
	Supporting connection to QJ71CMON	2.77F					
	Supporting connection to Q02PHCPU and Q06PHCPU	2.82L	Communication driver A/QnA/QCPU, QJ71C24 [03.13.**]	○	○	×	○
	Supporting connection to Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q13UDEHCPU, and Q26UDEHCPU						
MELSECNET/H connection (PLC to PLC network)	Supporting connection to MELSECNET/H (PLC to PLC network)	2.25B	-	×	○	×	×
		2.32J	Communication driver MELSECNET/H [03.00.**]	○	○	×	×
	Supporting routing parameter setting with GT Designer2.	2.43V	Communication driver MELSECNET/H [03.01.**]	○	×	×	×
	Supporting connection to Universal model QCPU	2.63R	Communication driver MELSECNET/H[03.07.**]	○	○	×	×
	Supporting connection to Q17nDCPU						
	Supporting connection to CNC C70						
	Supporting connection to CRnQ-700	2.73B	Communication driver MELSECNET/H[03.09.**]	○	○	×	×
	Supporting connection to Q13UDHCPU and Q26UDHCPU	2.77F	Communication driver MELSECNET/H[03.12.**]	○	○	×	×
	Supporting connection to Q02PHCPU and Q06PHCPU	2.82L	Communication driver MELSECNET/H[03.13.**]	○	○	×	×
	Supporting connection to Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q13UDEHCPU, and Q26UDEHCPU						
	Supporting connection to QS001CPU			○	○	×	×
MELSECNET/10 connection (PLC to PLC network)	Supporting connection to MELSECNET/ 10 PLC to PLC connection)	2.09K	Communication driver MELSECNET/10 [01.02.**]	○	○	×	×
	Supporting connection to Q172HCPU, Q173HCPU				×		
	Supporting automatic system switching for QCPU redundant system	2.32J	Communication driver MELSECNET/10 [03.00.**]	○	○	×	×
	Supporting routing parameter setting with GT Designer2.	2.43V	Communication driver MELSECNET/H [03.01.**]	○	×	×	×
	Supporting connection to Universal model QCPU	2.63R	Communication driver MELSECNET/H[03.07.**]	○	○	×	×
	Supporting connection to Q17nDCPU						
	Supporting connection to CNC C70						

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
MELSECNET/10 connection (PLC to PLC network)	Supporting connection to CRnQ-700	2.73B	Communication driver MELSECNET/H[03.09.**]	○	○	×	×
	Supporting connection to Q13UDHCPU and Q26UDHCPU	2.77F	Communication driver MELSECNET/H[03.12.**]	○	○	×	×
	Supporting connection to Q02PHCPU and Q06PHCPU	2.82L	Communication driver MELSECNET/H[03.13.**]	○	○	×	×
	Supporting connection to Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q13UDEHCPU, and Q26UDEHCPU			○	○	×	×
	Supporting connection to QS001CPU			○	○	×	×
CC-Link IE controller network connection	Supporting connection to CC-Link IE controller network	2.77F	Communication driver CC-Link IE Controller Network[03.12.**]	○	○	×	×
	Supporting connection to Q02PHCPU and Q06PHCPU	2.82L	Communication driver CC-Link IE Controller Network[03.13.**]	○	○	×	×
	Supporting connection to Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q13UDEHCPU, and Q26UDEHCPU			○	○	×	×
	Supporting connection to QS001CPU			○	○	×	×
CC-Link connection (Intelligent device station)	Supporting connection to CC-Link (Intelligence device station)	2.09K	Communication driver CC-LINK(ID) [01.02.**]	○	×	×	×
	Supporting connection to Q172HCPU, Q173HCPU			○	×	×	×
	Supporting connection to CC-Link Ver.2	2.32J	Communication driver CC-Link Ver2 (ID) [03.00.**]	○	×	×	×
	Supporting connection to Universal model QCPU	2.63R	Communication driver CC-Link Ver2 (ID) [03.07.**]	○	×	×	×
	Supporting connection to Q17nDCPU			○	×	×	×
	Supporting connection to CNC C70			○	×	×	×
	Supporting the redundant system with the redundant type extension base unit	2.82L	Communication driver CC-Link Ver2 (ID) [03.13.**]	○	×	×	×
	Supporting connection to CRnQ-700			○	×	×	×
	Supporting connection to Q13UDHCPU and Q26UDHCPU			○	×	×	×
	Supporting connection to Q02PHCPU and Q06PHCPU			○	×	×	×
CC-Link connection (Via G4)	Supporting connection to CC-Link (Via G4)	2.09K	Communication driver CC-LINK(G4) [01.02.**]	○	×	×	○
	Supporting connection to Q172HCPU, Q173HCPU			○	×	×	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
CC-Link connection (Via G4)	Supporting connection to Universal model QCPU	2.63R	Communication driver CC-Link(G4)[03.07.**]	○	×	×	○
	Supporting connection to Q17nDCPU						
	Supporting connection to CNC C70						
	Supporting the redundant system with the redundant type extension base unit						
	Supporting connection to AJ65BT-R2N	2.73B	Communication driver CC-Link(G4)[03.09.**]	○	×	×	○
	Supporting connection to CRnQ-700						
	Supporting settings for the number of retries, the timeout time, and delay time						
	Supporting connection to Q13UDHCPU and Q26UDHCPU	2.77F	Communication driver CC-Link(G4)[03.12.**]	○	×	×	○
	Supporting connection to Q02PHCPU and Q06PHCPU	2.82L	Communication driver CC-Link(G4)[03.13.**]	○	×	×	×
	Supporting connection to Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q13UDEHCPU, and Q26UDEHCPU						
Ethernet connection	Supporting connection to the Ethernet	2.09K	Communication driver QJ71E71/AJ71(Q)E71 [01.02.**]	○	○	×	×
	Supporting connection to Q172HCPU, Q173HCPU				×		
	Supporting automatic system switching for QCPU redundant system	2.32J	Communication driver QJ71E71/AJ71(Q)E71 [03.00.**]	○	○	×	×
	Supporting routing parameter setting with GT Designer2.	2.43V	Communication driver QJ71E71/AJ71(Q)E71 [03.01.**]	○	○	×	×
	Supporting connection to Universal model QCPU	2.63R	Communication driver QJ71E71/AJ71(Q)E71, Q17nNC[03.07.**]	○	○	×	×
	Supporting connection to Q17nDCPU						
	Supporting connection to CNC C70						
	Supporting the redundant system with the redundant type extension base unit						
	Supporting the redundant system with the remote I/O station of the MELSECNET/H network system				×		
	The communication driver name is changed.	2.73B	Communication driver QJ71E71/AJ71(Q)E71,Q17nNC, CRnD-700 [03.09.**]	○	×	×	×
	Supporting connection to CRnQ-700 and CRnD-700			○	○	×	×
	Supporting connection to Q13UDHCPU and Q26UDHCPU	2.77F	Communication driver QJ71E71/AJ71(Q)E71,Q17nNC, CRnD-700 [03.12.**]	○	○	×	×

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
Ethernet connection	The communication driver name is changed.	2.82L	Communication driver Ethernet(MELSEC),Q17nNC, CRnD-700 [03.13.**]	○	×	×	×
	Supporting connection to Q02PHCPU and Q06PHCPU						
	Supporting connection to Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q13UDEHCPU, and Q26UDEHCPU			○	○	×	×
	Supporting connection to QS001CPU			○	○	×	×
MODBUS® /TCP	Supporting connection to the MODBUS® /TCP	2.73B	Communication driver MODBUS/TCP [03.09.**]	○	×	×	×
OMRON PLC connection	Extended device range monitored (The setting of TIM or CNT up to 4095, etc.)	2.09K	Communication driver OMRON SYSMAC [01.02.**]	○	○	×	○
	Supporting delay time setting	2.27D	Communication driver OMRON SYSMAC [02.04.**]	○	×	×	○
	Supporting the settings of Retry and Timeout Time.	2.43V	Communication driver OMRON SYSMAC [03.01.**]	○	×	×	○
	Supporting connection to CP1L	2.82L	Communication driver OMRON SYSMAC [03.13.**]	○	×	×	○
KEYENCE PLC connection	Supporting connection to KEYENCE PLC	2.18U	Communication driver KEYENCE KV700/1000 [02.02.**]	○	×	×	○
	Supporting connection to KV-3000 and KV-5000	2.77F	Communication driver KEYENCE KV700/1000 [03.12.**]	○	×	×	○
KOYO EI PLC connection	Supporting connection to KOYO EI PLC	2.82L	Communication driver KOYO KOSTAC/DL [03.13.**]	○	×	×	○
SHARP PLC connection	Supporting connection to SHARP PLC	2.09K	Communication driver SHARP JW [01.02.**]	○	×	×	○
	Supporting settings for the number of retries and the timeout time	2.73B	Communication driver SHARP JW [03.09.**]	○	×	×	○
TOSHIBA PLC connection	Supporting connection to TOSHIBA PLC	2.09K	Communication driver TOSHIBA PROSEC T/V [01.02.**]	○	×	×	○
	Supporting settings for the number of retries, the timeout time, and delay time	2.73B	Communication driver TOSHIBA PROSEC T/V [03.09.**]	○	×	×	○
	Supporting connection to model2000(S2T)	2.77F	Communication driver TOSHIBA PROSEC T/V [03.12.**]	○	×	×	○
TOSHIBA MACHINE PLC connection	Supporting connection to TOSHIBA MACHINE PLC	2.77F	Communication driver TOSHIBA MACHINE TCmini [03.12.**]	○	×	×	○
JTEKT PLC connection	Supporting connection to JTEKT PLC	2.32J	Communication driver JTEKT TOYOPUC-PC [03.00.**]	○	×	×	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
HITACHI IES PLC connection	Supporting connection to HITACHI IES PLC	2.09K	Communication driver HITACHI HIDIC H [01.02.**] HITACHI HIDIC H (Protocol 2) [01.02.**]	○	×	×	○
	Supporting settings for the number of retries, the timeout time, and delay time	2.73B	Communication driver HITACHI HIDIC H [03.09.**] HITACHI HIDIC H (Protocol 2) [03.09.**]	○	×	×	○
HITACHI PLC connection	Supporting connection to HITACHI PLC	2.43V	Communication driver HITACHI S10mini/S10V [03.01.**]	○	×	×	○
FUJI FA PLC connection	Supporting connection to FUJI FA PLC	2.43V	Communication driver FUJI MICREX-F [03.01.**]	○	×	×	○
MATSUSHITA PLC connection	Supporting connection to MATSUSHITA PLC	2.09K	Communication driver MATSUSHITA MEWNET-FP [01.02.**]	○	×	×	○
	Supporting connection to FP-Σ	2.18U	Communication driver MATSUSHITA MEWNET-FP [02.02.**]	○	×	×	○
	Supporting connection to FP-X	2.58L	Communication driver MATSUSHITA MEWNET-FP [03.03.**]	○	×	×	○
	The device range applicable to monitoring is extended. (Up to 991F for R and up to 911 for WR can be set.)			○	×	×	○
	Supporting settings for the timeout time and the delay time	2.73B	Communication driver MATSUSHITA MEWNET-FP [03.09.**]	○	×	×	○
YASKAWA PLC connection	Supporting connection to MP2000 and MP3000	2.47Z	Communication driver YASKAWA GL/CP9200(SH/H)/ CP9300MS [03.02.**]	○	×	×	○
	Supporting the Ethernet connection	2.47Z	Communication driver Ethernet(YASKAWA) [03.02.**]	○	○	×	×
	Supporting settings for the number of retries and the timeout time	2.73B	Communication driver YASKAWA GL/CP9200(SH/H)/ CP9300MS [03.09.**]	○	×	×	○
	Supporting connection to CP-312	2.77F	Communication driver Ethernet(YASKAWA) [03.12.**]	○	×	×	×
YOKOGAWA PLC connection	Supporting connection to STARDOM	2.32J	Communication driver YOKOGAWA FA500/FA-M3/ STARDOM [03.00.**]	○	×	×	○
	Supporting the Ethernet connection	2.47Z	Communication driver Ethernet(YOKOGAWA) [03.02.**]	○	○	×	×
	Supporting connection to the MODBUS® /TCP	2.73B	Communication driver MODBUS/TCP [03.09.**]	○	×	×	×

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
ALLEN-BRADLEY PLC connection	Can use L device by MicroLogix 1000/1200/1500 series	2.18U	Communication driver AB MicroLogix [02.02.**]	○	×	×	○
	Supporting connection to Control/CompactLogix	2.58L	Communication driver AB Control/CompactLogix [03.03.**]	○	×	×	○
	Supporting the Ethernet connection	2.63R	Communication driver EtherNet/IP(AB)[03.07.**]	○	×	×	×
GE FANUC PLC connection	Supporting connection to GE FANUC PLC	2.82L	Communication driver GE Fanuc Automation(SNP-X) [03.13.**]	○	×	×	○
LS IS PLC connection	Supporting connection to LS IS PLC	2.90U	Communication driver LS Industrial Systems MASTER-K[04.02.**]	○	×	×	○
SCHNEIDER PLC connection	Supporting connection to the MODBUS® /TCP	2.73B	Communication driver MODBUS/TCP [03.09.**]	○	×	×	×
SIEMENS PLC connection	Supporting connection to SIEMENS S7-200 series	2.18U	Communication driver SIEMENS S7-200 [02.02.**]	○	×	×	○
Microcomputer connection	Supporting XON/XOFF control	2.32J	Communication driver Computer [03.00.**]	○	×	×	○
	Supporting interrupt extension						
OMRON temperature controller connection	Supporting connection to OMRON temperature controller	2.18U	Communication driver OMRON THERMAC / INPANEL NEO [02.02.**]	○	×	×	○
	The functions to automatically stop monitoring faulty stations and to disconnect communications with controllers are added.	2.58L	Communication driver OMRON THERMAC/INPANEL NEO [03.03.**]	○	×	×	○
SHINKO indicating controller connection	Supporting connection to SHINKO indicating controller	2.43V	Communication driver Shinko Technos Controller [03.01.**]	○	×	×	○
	The functions to automatically stop monitoring faulty stations and to disconnect communications with controllers are added	2.58L	Communication driver Shinko Technos Controller [03.03.**]	○	×	×	○
CHINO controller connection	Supporting connection to CHINO controller	2.58L	Communication driver CHINO Controllers(MODBUS) [03.03.**]	○	×	×	○
	The functions to automatically stop monitoring faulty stations and to disconnect communications with controllers are added						
FUJI SYS temperature controller connection	Supporting connection to FUJI SYS temperature controller	2.32J	Communication driver FUJI PXR/PXG/PXH [03.00.**]	○	×	×	○
	The functions to automatically stop monitoring faulty stations and to disconnect communications with controllers are added	2.58L	Communication driver FUJI PXR/PXG/PXH [03.03.**]	○	×	×	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
YAMATAKE temperature controller connection	Supporting connection to YAMATAKE temperature controller	2.18U	Communication driver YAMATAKE SDC/DMC [02.02.**]	○	×	×	○
	The functions to automatically stop monitoring faulty stations and to disconnect communications with controllers are added	2.58L	Communication driver YAMATAKE SDC/DMC [03.03.**]	○	×	×	○
YOKOGAWA temperature controller connection	Supporting connection to YOKOGAWA temperature controller	2.43V	Communication driver YOKOGAWA GREEN/UT100/ UT2000 [03.01.**]	○	×	×	○
	The functions to automatically stop monitoring faulty stations and to disconnect communications with controllers are added	2.58L	Communication driver YOKOGAWA GREEN/UT100/ UT2000 [03.03.**]	○	×	×	○
RKC temperature controller connection	Supporting connection to RKC temperature controller	2.18U	Communication driver RKC SR Mini HG(MODBUS) [02.02.**]	○	×	×	○
	Supporting connection to SRZ	2.58L	Communication driver RKC SR Mini HG(MODBUS) [03.03.**]	○	×	×	○
	The functions to automatically stop monitoring faulty stations and to disconnect communications with controllers are added						
Inverter connection	Supporting connection to inverter	2.18U	Communication driver FREQROL 500/700 [02.02.**]	○	×	×	○
	Setting range for Timeout Time has been changed. (3 to 30 seconds → 1 to 30 seconds)	2.43V	Communication driver FREQROL 500/700 [03.01.**]	○	×	×	○
	Supporting connection to E700 series and V500/V500L series	2.63R	Communication driver FREQROL 500/700[03.07.**]	○	×	×	○
Servo amplifier connection	Supporting connection to servo amplifier	2.09K	Communication driver MELSERVO-J2S/M [01.02.**]	○	×	×	○
	Supporting connection to MELSERVO-J3 series	2.18U	Communication driver MELSERVO-J3,J2S/M [02.02.**]	○	×	×	○
	Supporting connection to MR-J3-*T series	2.63R	Communication driver MELSERVO-J3, J2S/M [03.07.**]	○	×	×	○
	Supporting writing to the E ² PROM area in parameter writing	2.32J	Communication driver MELSERVO-J3, J2S/M [03.00.**]	○	×	×	○
	Supporting the point table setting for MR-J2S-*CP	2.32J	Communication driver MELSERVO-J3, J2S/M [03.00.**]	○	×	×	○
	Supporting the test run mode	2.32J	Communication driver MELSERVO-J3, J2S/M [03.00.**]	○	×	×	○
	Supporting settings for the number of retries, the timeout time, and delay time	2.73B	Communication driver MELSERVO-J3, J2S/M [03.09.**]	○	×	×	○
	Enables setting the host station address.	2.90U	Communication driver MELSERVO-J3, J2S/M [04.02.**]	○	×	×	○
Robot controller connection	Supporting connection to robot controller	2.77F	Communication driver QJ71E71/AJ71(Q)E71,Q17nNC, CRnD-700 [03.12.**]	○	○	×	×

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
CNC connection (MELDAS C6/C64)	Supporting connection to CNC (MELDAS C6/C64 series)	2.18U	Communication driver A/QnA/QCPU, QJ71C24, MELDAS C6 ⁺ [02.02.**] A/QnAQJ71E71/AJ71(Q)E71 [02.02.**] MELSECNET/10 [02.02.**] CC-Link(ID) [02.02.**]	○	○	×	○
	Communication driver name has been changed.	2.43V	Communication driver AJ71QC24, MELDAS C6* [03.01.**]	○	×	×	○
	Supporting settings for the number of retries, the timeout time, and delay time	2.73B	Communication driver AJ71QC24, MELDAS C6* [03.09.**]	○	×	×	○
	Communication driver name has been changed.		Communication driver QJ71E71/AJ71(Q)E71, Q17nNC, CRnD-700 [03.09.**]	○	×	×	×
Bar code reader connection	Supporting connection to barcode reader	2.09K	Extended function OS Barcode [01.02.**]	○	×	○	○
	Supporting connection to 2D-code reader	2.27D	Extended function OS Barcode [02.04.**]	○	×	○	○
Printer connection	Supporting connection to printer	2.27D	Extended function OS Printer [02.04.**]	○	×	×	×
FA transparent	Supporting the FA transparent function via USB	2.09K	GT15 Standard monitor OS [01.02.**] GT11 Standard monitor OS [01.02.**] Boot OS [01.02.**.C]	○	×	○	○
	MT Developer (via USB), MR Configurator and FR Configurator are added as compatible software.	2.27D	Standard monitor OS [02.04.**]	○	×	○	○
	GX Configuration and PX Developer are added as compatible software.	2.32J	Standard monitor OS [03.00.**]	○	×	○	○
	Supporting the computer link connection between the GOT and PLC on GX Developer	2.77F	Standard monitor OS [03.12.**]	○	×	○	○
	Supporting the computer link connection between the GOT and PLC on PX Developer	2.82L	Standard monitor OS [03.13.**]	○	×	○	○
	FX Configurator-FP is added as compatible software.						
Multiple-GT11 connection	Connection with multiple GT11s	2.09K	Standard monitor OS [01.02.**]	×	×	○	○
External I/O device connection	Supporting connection to external I/O devices	2.58L	Extended function OS External I/O / Operation Panel [03.03.**]	○	×	×	×
RFID connection	Supporting connection to the RFID controller	2.73B	Extended function OS RFID [03.09.**]	○	×	○	○

3 Added GT Designer2 functions

(1) For GT16

Item	Description	Version of GT Designer2	Version of OS
Function for GT Designer2	All GT15 functions added by GT Designer2 Version2.90U or earlier are available.	2.90U	Standard monitor OS [04.02.**]

(2) For GT15, GT SoftGOT1000, and GT11

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Ethernet download	Downloading the project data via Ethernet	2.09K	Standard monitor OS [01.02.**]	○	×	×
Basic comment, comment group	Copying comments in column unit on Basic Comment or Comment Group, etc.	2.09K	-	○	○	○
	Enables editing the comment group directly in settings for lamps and touch switches.	2.77F	-	○	○	○
Library workspace	Improved library structure and added import function	2.09K	-	○	○	○
	Improved user library structure, expanded the user library registration capacity, copying the figure data to the user library, etc.	2.18U	-	○	○	○
	Addition of fixed frame figure	2.18U	-	○	○	○
	Enables setting the background color of the figures in the Library Editor screen.	2.47Z	-	○	○	○
	Enables sorting the figure data by subject or function and displaying different-shaped figures in the same color in the image list.	2.58L	-	○	○	○
	Real type data are added to the subject in the library.	2.63R	-	○	○	○
Project data matching	Matching project data stored in GOT and project data opened on GT Designer2	2.09K	Standard monitor OS [01.02.**]	○	○	○
	Project data matching is available between the GOT and GT Designer2 even if the minor versions are not matched.	2.82L	-	○	×	○
Copy ON → OFF Copy OFF → ON	Enables copying of only characters in lamp display, touch switch and comment display.	2.18U	-	○	○	○
	Enables copying of only comment No. in bit lamp, touch switch, and comment display(bit).	2.73B	-	○	○	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Import, Export	Enables editing of the settings for advanced alarm observation (advanced user alarm), alarm history, advanced recipe function and recipe function in the CSV file format and other format.	2.18U	-	○	○	○
	Items that can be imported or exported with the advanced alarm observation and alarm history are added. (Device No., comment No., detail No., and others)	2.77F	-	○	○	×
Print	Enables printing of header and footer	2.18U	-	○	○	○
Edit	Enables duplicating and consecutive copying of figures and objects.	2.90U	-	○	○	○
Data View	Enables changing of the settings for the respective objects in grouped objects	2.18U	-	○	○	○
Batch Edit	Enables global replacement of channel No.	2.18U	-	○	○	×
Screen Preview	Enables checking for security level switching and language switching in image after switching	2.18U	-	○	○	○
Wizard	Wizard for setting the GOT type, controller type and communication settings when creating a new project	2.18U	-	○	○	○
Screen script, project script	Settings on the Script Edit dialog are available for screen script and project script.	2.27D	-	○	○	×
Auxiliary setting	Setting of maintaining screen numbers of the screens being displayed (System Information) during screen switching is added.	2.27D	-	○	○	○
Expansion / Reduction	Supports expansion/reduction when multiple objects and shapes are selected.	2.32J	-	○	○	○
	Supports automatically zooming in and out objects and figures suitable for the screen size when the GOT type is changed to a GOT type with different resolution.	2.73B	-	○	○	○
Screen capture	Function for capturing the specified range and loading to GT Designer2	2.43V	-	○	○	○
Zoom	<ul style="list-style-type: none"> Interval of magnification specification has been changed. +/- buttons have been added. Zoom in/zoom out operations using the " Ctrl key" and "Mouse wheel" have been added. 	2.43V	-	○	○	○
Guidelines	Lines to align figures and objects are displayed when arranging a placed figure or object.	2.90U	-	○	○	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Communication	Holds the previous downloaded drive.	2.47Z	-	○	×	○
	<ul style="list-style-type: none"> Enables updating BootOS without the standard monitor OS updated when only BootOS is already installed on the GOT. Enables installing the standard monitor OS with the communication driver at once when only BootOS is already installed on the GOT. 	2.58L	BootOS [03.03.**.P]	○	×	○
	Enables installing OSs on the A drive with the OS boot drive set to the A drive.	2.73B	-	○	×	×
Preferences	Enables setting the maximum number of screens to be displayed on GT Designer2.	2.63R	-	○	○	○
Device list	Functions of the collection target selection, jump, file output, and others are added.	2.73B	-	○	○	○
Text list	Enables displaying the direct input texts in a list.	2.90U	-	○	○	○
Reading BMP or JPEG image data	Enables displaying BMP or JPEG image data reduced to a resolution of 2000 × 1600 or less on GT Designer2.	2.77F	-	○	○	○

4 Added common settings/object functions

(1) For GT16

Item	Description	Version of GT Designer2	Version of OS
Common setting	All GT15 functions added by GT Designer2 Version2.90U or earlier are available.	2.90U	Standard monitor OS [04.02.**]
Window screen	Supporting the overlap windows 3, 4, and 5	2.90U	Standard monitor OS [04.02.**]
GOT internal device	The settable range of GS is extended to the range from GS0 to GS2047.	2.90U	Standard monitor OS [04.02.**]
Screen switching function	Enables setting the screen switching devices for the overlap windows 3, 4, and 5.	2.90U	Standard monitor OS [04.02.**]
Station No. Switching Function	Enables setting the station No. switching devices for the overlap windows 3, 4, and 5.	2.90U	Standard monitor OS [04.02.**]
System information	System information regarding the overlap windows 3, 4, and 5 is added.	2.90U	Standard monitor OS [04.02.**]
	System information regarding the E drive is added.		
Communication settings	Enables setting the multi-channel Ethernet connection.	2.90U	Standard monitor OS [04.02.**]
RGB display	Enables using up to two channels when the GT16M-R2 is used for the RGB input unit.	2.90U	Standard monitor OS [04.02.**] Extended function OS Video/RGB [04.02.**]
Multimedia function	Function to display or record video images taken by a video camera connected to the multimedia unit and to play video files stored in a CF card.	2.90U	Standard monitor OS [04.02.**] Extended function OS Multimedia [04.02.**]
Object function	All GT15 functions added by GT Designer2 Version2.90U or earlier are available.*1	2.90U	Standard monitor OS [04.02.**]

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS
Touch switch	[Batch Self Check], [USB Device Display], and [Multimedia] are added to [Switch Action] of the special function switch.	2.90U	Standard monitor OS [04.02.**]
	The go to screen switch is applicable to the overlap windows 3, 4, and 5.		
Screen Script	Supporting the overlap windows 3, 4, and 5	2.90U	Standard monitor OS [04.02.**]

*1 For the ASCII display or ASCII input, the Kana-kanji conversion is not available.

Only the Kana-kanji conversion (enhanced version) is available.

(2) For GT15, GT SoftGOT1000, and GT11

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Figure	JPEG file reading enabled	2.09K	Standard monitor OS [01.02.**]	○	○	×
	Function to import IGES format data.	2.43V	-	○	○	○
	Enables adjusting image qualities for reading JPEG files.	2.47Z	-	○	○	×
	Supporting piping	2.73B	Standard monitor OS [03.00.**]	○	○	○
	Enables setting the coordinates and the size using values.	2.90U	-	○	○	○
Object	Enables setting the coordinates and the size using values.	2.90U	-	○	○	○
Text	Windows® fonts applicable	2.09K	Standard monitor OS [01.02.**]	○	○	○
	Stroke font applicable	2.43V	Standard monitor OS [03.01.**]	○	○	×
	Enables specifying of background color.	2.32J	Standard monitor OS [03.00.**]	○	○	○
Standard font	<ul style="list-style-type: none"> Japanese 12dot Japanese 16dot Gothic Japanese 16dot Mincho 	2.04E	Standard monitor OS [01.01**]	○	○	○
	<ul style="list-style-type: none"> Japanese (supporting Europe) 12dot Japanese (supporting Europe) 16dot Gothic Japanese (supporting Europe) 16dot Mincho Chinese (Simplified) 12dot Chinese (Simplified) 16dot Mincho Chinese (Simplified) (supporting Europe) 12dot Chinese (Simplified) (supporting Europe) 16dot Mincho 	2.27D	Standard monitor OS [02.04.**] Boot OS [02.04.**.G]	○	○	○
TrueType font	Supporting the TrueType numerical font (7-segment)	2.90U	Standard monitor OS [04.02.**] Boot OS [04.02.**U]	○	○	○
Stroke font	Enables setting the KANJI region.	2.47Z	Standard monitor OS [03.02.**]	○	○	×
	Supporting Thai	2.47Z	Standard monitor OS [03.02.**]	○	○	×
	The following font name is changed. <ul style="list-style-type: none"> Stroke Standard Font(JPN) The following fonts are added. <ul style="list-style-type: none"> Stroke Standard Font(China GB) Stroke Standard Font(China GB)(supporting Hangul) 	2.58L	Extended function OS Stroke Standard Font [03.03.**]	○	×	×
	The following font is added. <ul style="list-style-type: none"> Stroke Font(JPN) 	2.58L	Option OS Stroke Font(JPN) [03.03.**]	○	×	×

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
KANJI Region	Supporting Chinese (Traditional)	2.18U	Standard monitor OS [02.02.**] Option OS Standard Font (China Big5) [02.02.**]	○	○	×
GOT internal device	System alarm information, printer status information, and GT SoftGOT1000 end device are added.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	The devices for the trigger buffer of the MES interface are added.	2.47Z	Standard monitor OS [03.02.**] Option OS MES Interface [03.02.**]	○	×	×
GOT Type	Supporting vertical installation type display	2.18U	Standard monitor OS [02.02.**]	×	×	○
Screen switching function	"ON" and "OFF" can be set.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Station No. Switching Function	Designation of the channel No. for which station No. is switched is possible.	2.18U	Standard monitor OS [02.02.**]	○	×	×
Language Switching Device	Language switching device can be used.	2.00A	Standard monitor OS [01.00.**]	○	○	×
		2.18U	Standard monitor OS [02.02.**]	○	○	○
	Enables setting the column No. of the comments to be displayed when the device value is out of range.	2.90U	Standard monitor OS [04.02.**]	○	○	○
Password Setting	Password can be set for the connection of motion controller and servo amplifier.	2.18U	Standard monitor OS [02.02.**]	○	×	○
System information	System information of report function and print are added.	2.27D	Standard monitor OS [02.04.**]	×	×	○
	D drive automatic recovery status notification signal is added.	2.32J	Standard monitor OS [03.00.**]	×	×	○
	System information regarding B drive has been added.	2.43V	Standard monitor OS [03.01.**]	○	○	×
Security	The name [Password] is changed to [Security] in the system environment.	2.58L	Standard monitor OS [03.03.**]	○	○	×
	Enables setting the operator authentication.	2.58L	Extended function OS Operator authentication [03.03.**]	○	○	×
GOT Setup	In clock management, both adjust and broadcast can be set.	2.18U	Standard monitor OS [02.02.**]	○	×	○
	Data save device of MELSEC-Q / QnA ladder monitor data can be set at GT Designer2.	2.18U	-	○	×	×
	Automatic program read at the start of ladder monitor for MELSEC-Q/QnA/ Priority Level Comment can be set.	2.43V	-	○	×	×
	Time setting for call key ON until the start up of utility can be set (for 1-point pressing).	2.18U	Standard monitor OS [02.02.**]	○	×	×
	Alarm can be set to be displayed in system language switching or battery drops.	2.27D	Standard monitor OS [02.04.**]	○	○	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
GOT Setup	Enables the backup/restore setting.	2.58L	-	○	×	×
	Enables the setting for monitoring local devices.			○	×	×
	Enables setting the drive for collectively reading comment data.			○	×	×
	Enables settings for the backup trigger setting and the maximum number of backup data.	2.73B	-	○	×	×
Clock Setting	Designation of the channel No. used for adjusting and broadcasting is possible.	2.18U	Standard monitor OS [02.02.**]	○	×	×
Startup Logo	Function for setting any screen for the GOT startup screen	2.09K	Standard monitor OS [01.02.**] Boot OS [01.02.**.C]	○	○	○
	Enables displaying a BMP data stored in the A drive as the startup logo when the OS boot drive is set to the A drive.	2.73B	Boot OS [03.09.**.S]	○	×	×
Handy GOT Setting	Setting of the grip switch LED of handy GOT	2.18U	Standard monitor OS [02.02.**]	×	×	○
Dialog window	System messages to be displayed on GOT can be customized or created by the user.	2.27D	Standard monitor OS [02.04.**]	○	×	○
Operation log	Function to save the GOT operation performed by the user as a history	2.32J	Standard monitor OS [03.00.**] Option OS Operation Log [03.00.**]	○	○	×
	Function for converting multiple files	2.43V	-	○	○	×
	The binary format file output can be converted to CSV/Unicode format file by external control.	2.43V	Standard monitor OS [03.01.**]	○	○	×
	Enables saving the operation log for the operator authentication.	2.58L	Standard monitor OS [03.03.**] Option OS Operation Log [03.03.**] Extended function OS Operator authentication [03.03.**]	○	○	×
Comment	Comment group can be used.	2.00A	Standard monitor OS [02.02.**]	○	○	×
		2.18U	Standard monitor OS [02.02.**]	○	○	○
Part	Enables setting the background color of the figures in the Parts Editor screen.	2.47Z	-	○	○	○
Key Window	User defined key window display can be switched in synchronization with the language switching device.	2.18U	Standard monitor OS [02.02.**]	○	○	○
	In the user defined key window, input range (maximum value) and input range (minimum value) are displayed.	2.18U	Standard monitor OS [02.02.**]	○	○	○
	The current value is displayed in the key window.	2.82L	Standard monitor OS [03.13.**]	○	○	○
Device setting	65 or later station numbers in the MELSECNET/G network system can be set with using Universal model QCPU as a relay station.	2.63R	Standard monitor OS [03.07.**]	○	○	×

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Object rename	Function to allow setting of object name	2.32J	Standard monitor OS [03.00.**]	○	○	○
Lamp	Windows® fonts applicable	2.09K	Standard monitor OS [01.02.**]	○	○	○
	Stroke font applicable	2.43V	Standard monitor OS [03.01.**]	○	○	×
	Figure created as a part can be used to a lamp.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	[Comment Group] can be used.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	Enables specifying the transparent color of a figure when using an image file as a figure.	2.47Z	Standard monitor OS [03.02.**]	○	○	×
Touch switch	Windows® fonts applicable	2.09K	Standard monitor OS [01.02.**]	○	○	○
	Stroke font applicable	2.43V	Standard monitor OS [03.01.**]	○	○	○
	Figure created as a part can be used to a touch switch.	2.43V	Standard monitor OS [03.01.**]	○	○	×
	Data change switch can be used.	2.32J	Standard monitor OS [03.00.**]	○	○	○
	[Comment Group] can be used.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	[Adjust Text Size] setting is possible.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	Auto repeat can be used.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	The touch switch on the ladder monitor with device search function can be used.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	[PX Developer Function call] is added to [Switch Action] of the special function switch.	2.47Z	Standard monitor OS [03.02.**]	×	○	×
Touch switch	[FX List Monitor], [Operator Information Management], [Log-in/Log-out (Operator Authentication)], [Password Change (Operator Authentication)], and [Backup/Restore] are added to [Switch Action] of the special function switch.	2.58L	Standard monitor OS[03.03.**]	○	○	×
	The name [Password] is changed to [Password (Security Level)] in [Switch Action] of the special function switch.			○	○	○
	[CNC Data Input/Output] is added to [Switch Action] of the special function switch.	2.63R	Standard monitor OS [03.07.**]	○	×	○
	[SFC Monitor] is added to [Switch Action] of the special function switch.	2.77F	Standard monitor OS [03.12.**]	○	×	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Numerical Display/ Numerical input	Setting to display input value when entering the value at input target object position is possible.	2.32J	Standard monitor OS [03.00.**]	○	×	×
	Format String setting is possible.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	Enables setting the TrueType Numerical for the font.	2.90U	Standard monitor OS [04.02.**]	○	○	○
ASCII Display / ASCII Input	Function to store NULL (0x00) at the end of input characters	2.18U	Standard monitor OS [02.02.**]	○	○	○
	Function to convert characters input in Kana into Kanji	2.18U	Standard monitor OS [02.02.**] Option OS KANA KANJI (JPN) [02.02.**]	○	○	×
	Alignment setting is added.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Setting for displaying an input value at the input target object position is possible.	2.32J	Standard monitor OS [03.00.**]	○	○	○
	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	The character display position during the ASCII input can be set to [Left] or [Right].	2.82L	Standard monitor OS [03.13.**]	○	○	○
	Supporting the Kana-kanji conversion (enhanced version)	2.90U	Standard monitor OS [04.02.**] Option OS KANA KANJI (JPN) (Enhanced Version) [04.02.**]	○	○	×
Clock display	Enables setting the TrueType Numerical for the font.	2.90U	Standard monitor OS [04.02.**]	○	○	○
Data List	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Comment Display	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	The simple comment is added.	2.77F	Standard monitor OS [03.12.**]	○	○	○
Advanced alarm popup display	Enables setting whether to enable or disable the display position switching.	2.90U	Standard monitor OS [04.02.**]	○	○	○
User alarm	Number of alarms settable for GT11 is extended to the same as GT15 (Up to 8192 alarms).	2.27D	Standard monitor OS [02.04.**]	○	○	○
	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Alarm history	Number of alarms settable for GT11 is extended to the same as GT15 (Up to 3072 alarms).	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Function to save alarm history data to the A drive (standard CF card) for GT11	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Function to display the cursor by touching an alarm, and function to output the corresponding comment No. to a device	2.32J	Standard monitor OS [03.00.**]	○	○	○
	The comment group application	2.73B	Standard monitor OS [03.09.**]	○	○	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Scrolling alarm display	The scrolling alarm display applicable	2.73B	Standard monitor OS [03.09.**]	×	×	○
Advanced Alarm	Function for detecting alarm even at the fall of bit device with Advanced User Alarm	2.09K	Standard monitor OS [01.02.**]	○	○	×
	Function to display a cursor by touching an alarm and to output the corresponding comment No. to a device.	2.43V	Standard monitor OS [03.01.**]	○	○	×
	The binary format file output can be converted to CSV/Unicode format file by external control.	2.43V	Standard monitor OS [03.01.**]	○	○	×
	For the advanced alarm display, the title row can be set to be hidden.	2.82L	Standard monitor OS [03.13.**]	○	○	×
	For the advanced alarm display, the alarm information in the top row is output if the external output trigger is on when the cursor is hidden.	2.82L	Standard monitor OS [03.13.**]	○	○	×
Parts Display/ Parts Movement	Function for using BMP/JPEG data in memory card as parts	2.09K	Standard monitor OS [01.02.**]	○	○	×
	Settings for BMP/JPEG file parts can be made on each object.	2.43V	Standard monitor OS [03.01.**]	○	○	×
	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	Enables specifying the transparent color of a figure when using an image file as a figure.	2.47Z	Standard monitor OS [03.02.**]	○	○	×
Panelmeter	Windows® fonts applicable	2.09K	Standard monitor OS [01.02.**]	○	○	○
	Stroke font applicable	2.43V	Standard monitor OS [03.01.**]	○	○	×
	Up to 101 points can be set for scale, value number.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Meter Attribute and Core can be set.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Level	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Trend graph	Up to 101 points can be set for scale, value number.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Function to collect data only when display trigger is met is added.	2.32J	Standard monitor OS [03.00.**]	○	○	○
Line graph	Up to 101 points can be set for scale, value number.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Function to collect data only when display trigger is met is added.	2.32J	Standard monitor OS [03.00.**]	○	○	○
	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Bar graph	Up to 101 points can be set for scale, value number.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Function to collect data only when display trigger is met is added.	2.32J	Standard monitor OS [03.00.**]	○	○	○
	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Statistics graph	Up to 101 points can be set for scale, value number.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Function to collect data only when display trigger is met is added.	2.32J	Standard monitor OS [03.00.**]	○	○	○
	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Scatter graph	Up to 101 points can be set for scale, value number.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Function to collect data only when display trigger is met is added.	2.32J	Standard monitor OS [03.00.**]	○	○	○
Historical Trend Graph	Function to display the data collected by the logging function in trend graph format	2.18U	Standard monitor OS [02.01.**]	○	○	×
Time Action	Second specification and external control are possible.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Logging Function	Function to collect and accumulate device values	2.18U	Standard monitor OS [02.02.**] Option OS Logging [02.02.**]	○	○	×
	Function for converting multiple files	2.43V	-	○	○	×
	The binary/CSV/Unicode format files output can be stored to another folder by external control.	2.43V	Standard monitor OS [03.01.**]	○	○	×
Device data transfer function	Function to read the device value and write in the other device when the trigger condition is satisfied.	2.73B	Extended function OS Device data transfer [03.09.**]	○	×	×
Recipe function	Number of devices settable for one recipe in GT11 is extended to the same as GT15 (Up to 8192 devices).	2.27D	Standard monitor OS [02.04.**] Option OS Recipe [02.04.**]	○	○	○
	Function to save recipe data of GT11 in CSV file format	2.27D	Standard monitor OS [02.04.**] Option OS Recipe [02.04.**]	○	○	○
	Function to save recipe data to the A drive (standard CF card) for GT11	2.27D	Standard monitor OS [02.04.**] Option OS Recipe [02.04.**]	○	○	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Advanced Recipe	The extended function of the existing recipe function	2.09K	Standard monitor OS [01.02.**] Option OS Advanced recipe [01.02.**]	○	○	×
	Function for converting multiple files	2.43V	-	○	○	×
	The binary format file output can be converted to CSV/Unicode format file by external control.	2.43V	Standard monitor OS [03.01.**]	○	○	×
	The number of records that can be set is changed to 2000.	2.58L	Standard monitor OS [03.03.**] Option OS Advanced Recipe [03.03.**]	○	○	×
Report function	Function to print the collected data	2.27D	Standard monitor OS [02.04.**] Extended function OS Report [02.04.**]	○	○	×
Hard copy function	Compatible with the printer output	2.27D	Standard monitor OS [02.04.**] Extended function OS Printer [02.04.**]	○	×	×
	Thumbnail Output can be set.	2.43V	Standard monitor OS [03.01.**]	○	○	×
Operation panel function	Enables setting the operation panel.	2.58L	Extended function OS External I/O / Operation Panel [03.03.**]	○	×	×
Sound output function	Enables setting the sound output.	2.58L	Extended function OS Sound Output [03.03.**]	○	○	×
Barcode	Function for loading the data read with bar cord reader to PLC CPU	2.09K	Standard monitor OS [01.00.**]	○	×	○
	Number of settable devices is extended from 32 to 1024 points.	2.27D	Standard monitor OS [02.04.**]	○	×	○
	Space (0x20) or NULL (0x00) can be selected for blank device.	2.27D	Standard monitor OS [02.04.**]	○	×	○
RFID function	Function to write in the devices which data are read by the RFID reader/writer.	2.73B	Extended function OS RFID [03.09.**]	○	×	○
Video display	Function to display an image taken by a video camera on the GOT	2.32J	Standard monitor OS [03.00.**] Extended function OS Video/RGB [03.00.**]	○	×	×
RGB display	Function to display the personal computer screen on the GOT	2.32J	Standard monitor OS [03.00.**] Extended function OS Video/RGB [03.00.**]	○	×	×
Remote personal computer operation function	Function to operate the mouse pointer on the personal computer by touching the personal computer screen displayed on the GOT using the RGB display function.	2.82L	Standard monitor OS [03.13.**] Extended function OS PC Remote Operation [03.13.**]	○	×	×

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Set overlay screen	Number of screens that can be called on GT11 is extended to the same as GT15 (Up to 2047 screens).	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Screen calling setting with dragging is possible.	2.43V	-	○	○	○
	Specifying of placement position (Front/Back) for the basic and called screens is possible.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	[Disable background colors of overlay screen when setting an overlay screen] can be set.	2.58L	Standard monitor OS [03.03.**]	○	○	○
Test function	Function for changing device value with displaying test window.	2.09K	Standard monitor OS [02.02.**]	○	×	○
Project Script	Function to execute scripts in unit of project file	2.00A	Standard monitor OS [01.00.**]	○	○	×
		2.18U	Standard monitor OS [02.02.**]	○	○	○
	Word device values can be converted into data in the specified data type, and the GOT can read or write the data. (Data type conversion function)	2.73B	Standard monitor OS [03.09.**]	○	○	○
	The file operation functions are added.	2.77F	Standard monitor OS [03.12.**]	○	○	○
Screen Script	Function to execute scripts in unit of screen	2.00A	Standard monitor OS [01.00.**]	○	○	×
		2.18U	Standard monitor OS [02.02.**]	○	○	○
	Word device values can be converted into data in the specified data type, and the GOT can read or write the data. (Data type conversion function)	2.73B	Standard monitor OS [03.09.**]	○	○	○
	The file operation functions are added.	2.77F	Standard monitor OS [03.12.**]	○	○	○
Object Script	Function to execute scripts in unit of object	2.18U	Option OS Object Script [02.02.**]	○	○	×
	"width", "height", and "decimal_point" are added to the object property.	2.90U	Option OS Object Script [04.02.**]	○	○	×
Key Code	Key codes for increment key and decrement key are added.	2.18U	Standard monitor OS [02.02.**]	○	○	○
	Key code for historical trend graph is added.	2.18U	Standard monitor OS [02.02.**]	○	○	×
	Key code used for Kana Kanji conversion is added.	2.18U	Standard monitor OS [02.02.**]	○	○	×
	Key codes for user ID ascending/descending order movement of cursor are added.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Key codes used for the Kana-kanji conversion (enhanced version) are added.	2.90U	Standard monitor OS [04.02.**]	○	○	×

5 Other functions added

(1) For GT16

Item	Description	Version of GT Designer2	Version of OS
Other function	All GT15 functions added by GT Designer2 Version2.90U or earlier are available.	2.90U	Standard monitor OS [04.02.**]
Backup/restore function	Enables setting the E drive for the storage location for the backup data or backup setting.	2.90U	Extended function OS Backup/Restore [04.02.**]
CNC data I/O function	Enables specifying the E drive for the target to input or output the CNC data.	2.90U	Extended function OS CNC Data I/O [04.02.**]
Multi-channel function	Supporting connection to multiple controllers on the Ethernet network	2.90U	Standard monitor OS [04.02.**] Communication driver Use the communication driver, [04.02.**] or later for each connection.

(2) For GT15, GT SoftGOT1000, and GT11

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Utility	Displays details in OS information, project information, alarm information, hard copy information and advance recipe information properties.	2.18U	Standard monitor OS [02.02.**]	○	×	○
Network unit status display	Function to display the status of MELSECNET/H communication unit and CC-Link communication unit	2.32J	Standard monitor OS [03.00.**]	○	○	×
GOT data package acquisition	Function for copying the installed OS or data in the GOT main unit to the memory card	2.43V	Standard monitor OS [03.01.**] BootOS [03.01.**.M]	○	×	○
Unlimited installation of extended function OSs and option OSs	Extended function OS and option OS can be installed unlimitedly. Extended function OS and option OS can be operated up to 21. (Conventionally, both of above OSs can be installed and operated up to 9. The extended function OS data size is twice as large as other OS data. The logging OS data size is three times as large as other OS data.)	2.18U	BootOS [02.02.**.E]	○	×	×
	Extended function OS and option OS can be operated up to 32. (The extended function OS data size is twice as large as other OS data. The logging OS data size is three times as large as other OS data.)	2.73B	BootOS [03.09.**.S]	○	×	×
Built-in option function board	GT15-FNB built in the GOT is enabled.	2.58L	BootOS [03.03.**.P] Standard monitor OS [03.03.**]	○	×	×
System monitoring function	Function for monitoring/testing device of PLC CPU or buffer memory of intelligent function module	2.09K	Extended function OS System monitor [01.02.**]	○	×	○
	Supporting display of Chinese (Simplified/Traditional), German, Korean	2.27D	Extended function OS System monitor [02.04.**]	○	×	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
System monitoring function	Supporting connection to Universal model QCPU	2.63R	Extended function OS System monitor [03.07.**]	○	×	○
	Supporting connection to CC-Link IE controller network	2.77F	Extended function OS System monitor [03.12.**]	○	×	×
Network monitor function	Function to monitor the network status of MELSECNET/H, MELSECNET/10, etc.	2.18U	Option OS Network monitor [02.02.**]	○	×	×
	Supporting display of Chinese (Simplified/Traditional), German, Korean	2.27D	Option OS Network monitor [02.04.**]	○	×	×
	Enables monitoring the status of the CC-Link IE controller network.	2.77F	Option OS Network monitor [03.12.**]	○	×	×
Ladder monitoring function	Function for displaying sequence program loaded to CPU on GOT	2.09K	Option OS Ladder monitor for MELSEC-A [01.02.**] Ladder monitor for MELSEC-Q/QnA [01.02.**] Ladder monitor for MELSEC-FX [01.02.**]	○	×	×
	Supporting display of Chinese (Simplified/Traditional), German, Korean	2.27D	Option OS Ladder monitor for MELSEC-Q/QnA [02.04.**] Ladder monitor for MELSEC-FX [02.04.**]	○	×	×
	Supporting language switching (Japanese/Korean) for displaying file name and title of the sequence program	2.27D	Option OS Ladder monitor for MELSEC-Q/QnA [02.04.**]	○	×	×
	Supporting the read of programs/comments	2.43V	Option OS Ladder monitor for MELSEC-Q/QnA [03.01.**]	○	×	×
	Supporting reading comments from CF cards	2.58L	Option OS Ladder monitor for MELSEC-Q/QnA [03.03.**]	○	×	×
	Supporting monitoring local devices	2.58L		○	×	×
	Supporting connection to Universal model QCPU	2.63R	Option OS Ladder monitor for MELSEC-Q/QnA [03.07.**]	○	×	×
	In searching multiple file programs, the backward search display is possible.	2.73B	Option OS Ladder monitor for MELSEC-Q/QnA [03.09.**]	○	×	×
	With MELSEC-QnA ladder monitor, the currently displayed program automatically reflect the set value of TC changed in the test function.					
	Supporting connection to CC-Link IE controller network	2.77F	Option OS Ladder monitor for MELSEC-Q/QnA [03.12.**]	○	×	×
	Supporting the safety function block display when using the QS001CPU (Only the FB definition name is displayed in the application instruction format.)	2.82L	Option OS Ladder monitor for MELSEC-Q/QnA [03.13.**]	○	×	×
	The ranges of M and B devices that can be monitored are expanded.	2.82L	Option OS Ladder monitor for MELSEC-Q/QnA [03.13.**]	○	×	×

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Intelligent module monitor function	Function to monitor and change the data of intelligent function module buffer memory using a dedicated screen	2.18U	Option OS Intelligent module monitor [02.02.**]	○	×	×
	Supporting connection to CC-Link IE controller network	2.77F	Option OS Intelligent module monitor [03.12.**]	○	×	×
	When using the QS001CPU, the PC information monitor screen (Operation details screen, Error details screen) is displayed.	2.82L	Option OS Intelligent module monitor [03.13.**]	○	×	×
List editor for MELSEC-A	Function for displaying/editing sequence program saved from ACPU with list mode	2.09K	Option OS List editor for MELSEC-A [01.02.**]	○	×	○
List editor for MELSEC-FX	Function to display / edit the sequence program read out from the FXCPU in the list mode	2.18U	Option OS List editor for MELSEC-FX [02.02.**]	○	×	○
	Supporting display of Chinese (Simplified)	2.27D	Extended function OS List editor for MELSEC-FX [02.04.**]	○	×	○
	Supporting display of Chinese (Simplified/Traditional), German and Korean (GT11 supports display of Chinese (Simplified/Traditional) and Korean)	2.27D	Extended function OS List editor for MELSEC-FX [02.04.**]	○	×	○
Servo amplifier monitor function	Function to monitor the servo amplifier and also to change parameters, execute test run, etc.	2.18U	Option OS Servo amplifier monitor [02.02.**]	○	×	×
Q motion monitor function	Function to execute servo monitor and parameter setting for motion controller CPU (Q series)	2.18U	Option OS Q motion monitor [02.02.**]	○	×	×
	Parameter setting is enabled for Q172HCPU/Q173HCPU.	2.32J	Standard monitor OS [03.00.**]	○	×	×
	Supporting connection to Q17nDCPU	2.63R	Option OS Q motion monitor [03.07.**]	○	×	×
	Enables clearing the SFC error history. (Universal model QCPU only)	2.63R	Option OS Q motion monitor [03.07.**]	○	×	×
	Supporting connection to CC-Link IE controller network	2.77F	Option OS Q motion monitor [03.12.**]	○	×	×
CNC monitor function	Function to monitor the MELDAS that is connected to the GOT	2.18U	Option OS CNC monitor [02.02.**]	○	×	×
	Supporting connection to CNC C70	2.63R	Option OS CNC monitor [03.07.**]	○	×	×
Backup/restore function	Function to back up setting data for controllers and to restore the data to the controllers	2.58L	Extended function OS Backup/Restore [03.07.**]	○	×	×
	Supporting Backup Data Conversion Tool	2.63R	-	○	×	×
	Supporting the trigger backup	2.73B	Extended function OS Backup/Restore [03.09.**]	○	×	×

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
CNC data I/O function	Function to copy or delete data of the CNC that is connected to the GOT	2.63R	Extended function OS CNC Data I/O [03.07.**]	○	×	×
SFC monitor function	Function to display sequence programs written in the PLC CPU in the SFC diagram format on the GOT	2.77F	Extended function OS GOT Platform Library [03.12.**] Option OS SFC Monitor [03.12.**] GOT Function Expansion Library [03.12.**]	○	×	×
Multi-channel function	Function to monitor multiple controllers with a single unit of GOT	2.18U	Standard monitor OS [02.02.**] Communication driver Use the communication driver, [02.02.**] or later for each connection.	○	×	×
Gateway function	Function for monitoring each controller from one GOT/PC or sending a mail from GOT	2.09K	Option OS Gateway function (Mail) [01.02.**] Gateway function (Server, Client) [01.02.**]	○	×	×
	Supporting the FTP server function	2.18U	Option OS Gateway functionFTP [02.02.**]	○	×	×
	Enables transfer of binary data by the FTP server function.	2.32J	Option OS Gateway (FTP) [03.00.**]	○	×	×
Document display function	Function to display document on the GOT	2.32J	Standard monitor OS [03.00.**] Option OS Document Display [03.00.**]	○	○	×
	Image quality adjustment for documents is possible.	2.43V	Standard monitor OS [03.01.**]	○	○	×
MES interface function	Function to execute data linkage between the control and information systems	2.43V	Standard monitor OS [03.01.**] Option OS MES Interface [03.01.**]	○	×	×
	Oracle 8i, ACCESS2000, ACCESS2003, and MSDE2000 are added to the applicable database.	2.47Z	Standard monitor OS [03.02.**] Option OS MES Interface [03.02.**]	○	×	×
	The trigger buffering function is added. Enables setting [Do not sample] for the sampling setting in the device tag settings.					
	Industrial SQL Server 9.0 and Microsoft SQL Server 2005 are added as an applicable database.	2.58L	Standard monitor OS [03.03.**] Option OS MES Interface [03.03.**]	○	×	×
	Access 2007 is added as an applicable database.	2.82L	Standard monitor OS [03.13.**] Option OS MES Interface [03.13.**]	○	×	×
	Function to send resource data stored in the GOT to the database					

Appendix.1.2 For GT10

GT Designer2 Version 2.43V or later is applicable to GT1020.

GT Designer2 Version 2.58L or later is applicable to GT1030.

GT Designer2 Version 2.90U or later is applicable to GT105□.

1 Added GOT main unit

Target Models	Version of GT Designer2	Version of OS
GT1020-LBD, GT1020-LBD2, GT1020-LBL	2.43V	-
GT1020-LBDW, GT1020-LBDW2, GT1020-LBLW	2.58L	-
GT1030-LBD, GT1030-LBD2, GT1030-LBDW, GT1030-LBDW2	2.58L	-
GT1055-QSBD, GT1050-QBBD	2.90U	-

2 Added connection types

○ : Applicable × : N/A - : Applicable (from the first version)

Item	Description	Version of GT Designer2	Version of OS	GT 105□	GT 1030	GT 1020
Direct connection to CPU	Supporting connection to FX3G series	2.90U	Standard monitor OS [01.10.**] Communication driver MELSEC-FX[01.06.**]	○	○	○
Computer link connection	Supporting connection to A series PLC	2.82L	Standard monitor OS [01.09.**] Communication driver AJ71C24/UC24[01.04.**]	-	○	○
CC-Link connection (Via G4)	Supporting connection to CC-Link (Via G4)	2.73B	Standard monitor OS [01.07.**] Communication driver CC-Link(G4)[01.00.**]	-	○	○
Microcomputer connection	Supporting the data formats of Format 1 and Format 2.	2.47Z	Standard monitor OS [01.02.**] Communication driver Computer[01.02.**]	-	-	○
OMRON PLC connection	Supporting connection to OMRON PLC	2.47Z	Standard monitor OS [01.02.**] Communication driver OMRON SYSMAC [01.02.**]	-	-	○
KEYENCE PLC connection	Supporting connection to KEYENCE PLC	2.73B	Standard monitor OS [01.07.**] Communication driver KEYENCE KV-700/1000[01.00.**]	-	○	○
	Supporting connection to KV-3000 and KV-5000	2.77F	Communication driver KEYENCE KV700/1000 [01.03.**]	-	○	○
TOSHIBA MACHINE PLC connection	Supporting connection to TOSHIBA MACHINE PLC	2.77F	Communication driver TOSHIBA MACHINE TCmini [01.03.**]	-	○	○
MATSUSHITA PLC connection	Supporting connection to MATSUSHITA PLC	2.73B	Standard monitor OS [01.07.**] Communication driver MATSUSHITA MEWNET-FP [01.00.**]	-	○	○
YASKAWA PLC connection	Supporting connection to CP9200SH/MP900 series	2.73B	Standard monitor OS [01.07.**] Communication driver YASKAWA MP [01.00.**]	-	○	○
	Supporting connection to MP2000/MP900 series	2.73B		-	○	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 105□	GT 1030	GT 1020
LS IS PLC connection	Supporting connection to LS IS PLC	2.90U	Standard monitor OS [01.07.**] Communication driver LS Industrial Systems MASTER-K [01.05.**]	○	○	○
ALLEN-BRADLEY PLC connection	Supporting connection to MicroLogix 1000/1200/1500 series.	2.58L	Standard monitor OS [01.04.**] Communication driver AB MicroLogix [01.00.**]	-	○	○
	Supporting connection to SLC500 series.	2.58L	Standard monitor OS [01.04.**] Communication driver AB SLC 500 [01.00.**]	-	○	○
SIEMENS PLC connection	Supporting connection to SIEMENS S7-200 series	2.58L	Standard monitor OS [01.04.**] Communication driver SIEMENS S7-200 [01.00.**]	-	○	○
	Supporting connection to SIEMENS S7-300/400 series	2.90U	Standard monitor OS [01.10.**] Communication driver SIEMENS S7-300/400 [01.05.**]	○	○	○
Inverter connection	Supporting connection to inverter	2.73B	Standard monitor OS [01.07.**] Communication driver FREQUOL 500/700 [01.00.**]	-	○	○
Bar code reader connection	Supporting connection to barcode reader	2.77F	Standard monitor OS [01.08.**]	-	○	○

3 Added GT Designer2 functions

Item	Description	Version of GT Designer2	Version of OS	GT 105□	GT 1030	GT 1020
Library	Enables setting the background color of the figures in the Library Editor screen.	2.47Z	-	-	-	○
Auxiliary setting	Enables setting [Specify the touch area.].	2.77F	-	-	○	×
Reading BMP or JPEG image data	Enables displaying BMP or JPEG image data reduced to a resolution of 2000 × 1600 or less on GT Designer2.	2.77F	-	-	○	○
Directly editing comment group	Enables editing the comment group directly in settings for the lamps and touch switches.	2.77F	-	-	○	○

4 Added common settings/object functions

Item	Description	Version of GT Designer2	Version of OS	GT 105□	GT 1030	GT 1020
Window screen	Corresponding to the overlap window display and the superimpose display.	2.73B	Standard monitor OS [01.07.**]	-	○	○
Figure	Supporting piping	2.73B	Standard monitor OS [01.00.**]	-	○	○
GOT Setup	The key reaction speed can be set.	2.82L	Standard monitor OS [01.09.**]	-	○	○
Clock function	The clock data storage to the GD device is possible.	2.73B	Standard monitor OS [01.07.**]	-	○	○
Numerical Display/ Numerical input	Format String setting is possible.	2.77F	Standard monitor OS [01.08.**]	-	○	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 105□	GT 1030	GT 1020
ASCII input	The ASCII input can be set.	2.58L	Standard monitor OS [01.03.**]	-	-	○
Comment Display	The simple comment is added.	2.77F	Standard monitor OS [01.08.**]	-	○	○
Lamp Display	[Comment Group] can be used.	2.77F	Standard monitor OS [01.08.**]	-	○	○
Touch switch	Auto repeat can be used.	2.73B	Standard monitor OS [01.07.**]	-	○	○
	[Comment Group] can be used.	2.77F	Standard monitor OS [01.08.**]	-	○	○
	The device monitor and debug function can be set for the action setting of the special function switch and the multi action switch.	2.82L	Standard monitor OS [01.09.**]	-	○	○
Graph	The statistics bar graph can be set.	2.58L	Standard monitor OS [01.03.**]	-	-	○
	The statistics pie graph can be set.	2.58L	Standard monitor OS [01.03.**]	-	-	○
Alarm history display	Enables selecting whether to set the scrolling comment display suitable for the message display area.	2.63R	Standard monitor OS [01.06.**]	-	○	○
	Comment group can be used.	2.73B	Standard monitor OS [01.07.**]	-	○	○
Scrolling alarm display	The scrolling alarm display applicable	2.73B	Standard monitor OS [01.07.**]	-	○	○

5 Other functions added

Item	Description	Version of GT Designer2	Version of OS	GT 105□	GT 1030	GT 1020
Installing/uploading with GT10-LDR	Enables installing or uploading the OS, communication drivers, project data, and others with the GT10-LDR.	2.77F	-	×	○	○
Installing OS	Enables installing the OS without the OS installation screen of the GOT.	2.77F	Standard monitor OS [01.08.**]	-	○	○
MELSEC-FX list editor function	Function to display or edit a sequence program read from the FXCPU in the list mode	2.90U	-	○	×	×

MEMO

[illegible]

INDEX

SYSTEM MONITOR

[A]

Access range 2-14

[B]

Batch Monitor 2-36

BM Monitor (Monitoring Buffer Memory) 2-46

[C]

Changing screens 2-30

[D]

Deleting entry devices 2-35

Devices that can be monitored 2-14

Display 2-16

[E]

Entering monitor devices

(specifying monitor stations and devices) 2-20

Entry Monitor 2-31

Error Messages and Corrective Action 2-56

[I]

Information and set items displayed on each
setting key window 2-51

Information displayed on the Batch Monitor
screen and key functions 2-36

Information displayed on the BM Monitor
screen and key functions 2-46

Information displayed on the Entry Monitor
screen and key functions 2-31

Information displayed on the TC Monitor
screen and key functions 2-41

Information displayed on the test menu
screen and key functions 2-50

[K]

Key window setting columns and
operation procedure 2-23

[O]

Outline until starting the system monitor 2-16

[P]

Precautions 2-14

Procedure for batch monitor basic operation 2-40

Procedure for BM monitor basic operation 2-48

Procedure for canceling TC monitor keywords 2-45

Procedure for displaying the test menu
screen and the setting key window screen 2-49

Procedure for entry monitor basic operation 2-34

Procedure for TC monitor basic operation 2-44

[Q]

Quick test operation of monitor devices 2-26

[P]

Specifications 2-6

Switching the display format (DEC/HEX)
and comment/no-comment 2-24

System configuration 2-6

[T]

TC Monitor (Monitoring Timers and Counters) 2-41

Test Operation 2-49

Test operation basic procedure 2-55

Test operation procedure 2-53

9

SERVO AMPLIFIER
MONITOR

10

CNC MONITOR
FUNCTION

11

BACKUP/RESTORE

12

CNC DATA I/O

13

SFC MONITOR

APPENDICES

INDEX

LADDER MONITOR FUNCTION

[A]		[T]
Access range	3-11	Test Operation..... 3-69
[C]		Touch search..... 3-67
Coil search	3-59	
Contact point search	3-57	
[D]		
Defect search	3-63	
Devices and range that can be monitored	3-9	
Device search	3-55	
Display	3-15	
Displaying 32 characters of comments	3-48	
Displaying notes.....	3-50	
Displaying statements	3-51	
Displaying the test menu screen	3-69	
Display switching of 16-bit (one-word)/32-bit (two-word) modules.....	3-45	
Display switching of decimal numbers/ hexadecimal numbers	3-46	
[E]		
Error Messages and Corrective Action	3-73	
[H]		
Hard copy output.....	3-44	
[I]		
Information and key functions displayed on the screen	3-37	
[L]		
Ladder end search	3-62	
[O]		
Operation Procedure Common	3-37	
Outline until the start	3-15	
[P]		
Precautions	3-11	
[S]		
Searching from the monitor screen	3-31	
Search Operation	3-54	
Setting and deleting media for saving ladder data	3-20	
Specifications	3-4	
Starts reading a comment file from a CF card	3-28	
Step search	3-61	
Switching comment/no-comment display	3-47	
Switching the Display Format.....	3-45	
System configuration.....	3-4	

MELSEC-A LIST EDITOR

[A]

- Access range 4-4
- Action if an incorrect key is input..... 4-19
- Adding (Inserting) commands 4-23

[B]

- Basic Operation..... 4-21

[C]

- Changing (Overwriting) commands..... 4-22
- Command input procedures..... 4-16
- Common operation..... 4-28

[D]

- Deleting commands 4-24
- Display 4-6
- Display format of the display area..... 4-12

[E]

- Error Messages and Corrective Actions..... 4-33
- Error messages and corrective actions in direct CPU connection 4-33
- Error using list editor function on the link system 4-37

[H]

- Hard copy output..... 4-19

[K]

- Key arrangement and a list of key functions 4-10

[L]

- List of functions 4-20
- List of Operation Procedures 4-28

[O]

- Operation Methods..... 4-10
- Operation of keyword input 4-8
- Outline until the start 4-6

[P]

- PLC CPU error messages and troubleshooting 4-36
- PLC memory all clear..... 4-27
- Precautions 4-5

[R]

- Reading sequence programs 4-21

[S]

- Selection and operation of modes..... 4-15
- Specifications 4-3

- Switching valid keys (upper/lower functions)..... 4-15
- System configuration..... 4-3

[U]

- Using the help function..... 4-25

9

SERVO AMPLIFIER
MONITOR

10

CNC MONITOR
FUNCTION

11

BACKUP/RESTORE

12

CNC DATA I/O

13

SFC MONITOR

APPENDICES

INDEX

MELSEC-FX LIST EDITOR

[A]	
Action for an incorrect key input.....	5-32
[C]	
Changing operands, set values.....	5-20
[D]	
Deleting commands	5-21
Display	5-6
[E]	
Error Messages and Corrective Actions.....	5-33
[H]	
Hard copy output.....	5-32
[K]	
Key arrangement and a list of key functions	5-9
Keywords	5-28
[L]	
List monitor.....	5-30
[O]	
Operation Procedures	5-9
[P]	
Parameter setting.....	5-25
PLC diagnostics	5-23
[S]	
Searching commands and devices	5-15
Selection and operation of modes.....	5-12
Sequence program all clear	5-22
Sequence program display	5-13
Specifications	5-3
System configuration.....	5-3
[W]	
Writing commands	5-17

INTELLIGENT MODULE MONITOR

[A]	
Access range.....	6-6
[C]	
Composition of PC Information monitor screen and key functions (only when using QCPU (Q mode))	6-18
Composition of the intelligent module monitor screen and key	6-23
Composition of the system configuration screen and key functions.....	6-15
Composition of the unit detail info screen and key functions (only when using QCPU (Q mode))	6-22
[D]	
Display.....	6-11
[E]	
Error Messages and Corrective Action.....	6-115
[I]	
Intelligent Module Monitor Screens	6-27
[M]	
Monitor screen configuration and key functions	6-114
[O]	
Operating I/O Module Monitor Screen.....	6-113
Operation of Each Intelligent Module Monitor Screen	6-15
[P]	
Precautions	6-8
[S]	
Setting method for other station monitoring	6-17
Specifications	6-3
Specifying a module to monitor and selecting monitor menu	6-24
Specifying the module to be monitored	6-113
System configuration.....	6-3
[T]	
Testing of the intelligent function module	6-25

NETWORK MONITOR	Q MOTION MONITOR
[A] Access range 7-7	[A] Access range 8-5
[D] Detailed monitor 7-15 Display 7-9	[D] Display 8-6
[E] Error Message and Corrective Action 7-30	[E] Error List Designated-Axis screen..... 8-15 Error List screen 8-13 Error Messages and Corrective Action..... 8-26
[L] Line monitor 7-12	[H] Hard copy output..... 8-25
[N] Network information that can be monitored 7-5	[M] Monitor Menu screen 8-10
[O] Operation Procedures 7-12 Other station communication status monitor..... 7-24 Other station CPU operation status monitor 7-27 Other station CPU RUN status monitor..... 7-28 Other station data link status monitor..... 7-25 Other station loop status monitor 7-29 Other station monitor..... 7-23 Other station parameter status monitor..... 7-26	[O] Operation Procedures 8-9
[P] Precautions 7-7	[P] Parameter setting screen 8-22 Positioning Monitor screen 8-17 Precautions 8-5 Present Value History Monitor screen..... 8-20 Present Value Monitor screen 8-11
[S] Specifications 7-3 System configuration..... 7-3	[S] Servo Monitor screen 8-19 SFC Error History screen 8-12 Specifications 8-3 System configuration..... 8-3 System configuration screen layout 8-9

SERVO AMPLIFIER MONITOR

[A]	
Access range	9-11
Alarm function	9-19
[D]	
Diagnostics function	9-22
Display	9-12
[E]	
Error Messages and Corrective Action	9-44
[H]	
Hard copy output.....	9-43
[M]	
Monitor functions.....	9-17
[O]	
Operations of Servo Amplifier Monitor Screens	9-15
[P]	
Parameter setting.....	9-29
Precautions	9-11
[S]	
Servo amplifier monitor	9-15
Setup.....	9-16
Specifications.....	9-3
System configuration.....	9-3
[T]	
Test operations	9-35

CNC MONITOR FUNCTIONS

[A]	
Access range.....	10-5
[D]	
Display.....	10-6
[E]	
Error Messages and Corrective Action.....	10-10
[O]	
Operation Procedures	10-8
[P]	
Precautions	10-5
[S]	
Specifications	10-2
System configuration.....	10-2

BACKUP/RESTORE	CNC DATA I/O
[A] Access range 11-9	[A] Access range 12-3
[C] Changing screens 11-12	[C] Changing screens 12-6
[D] Data list (restoration) 11-28 Data to be backed up and restored 11-4 Display operation 11-11	[D] Display 12-5 [E] Error Messages and Corrective Actions 12-9
[M] Main menu 11-26	[P] Precautions 12-3
[O] Operation procedures 11-26 Outline before starting 11-11	[S] Specifications 12-2 System configuration 12-2
[P] Precautions 11-9 Progress screen (backup) 11-27 Progress screen (restoration) 11-29	
[S] Security and password 11-14 Setting storage location for backup data 11-13 Specifications 11-3 System configuration 11-3	
[T] Trigger backup 11-19	

SFC MONITOR

[A]

Access range	13-8
Active block list window.....	13-36
Active step list window	13-35

[C]

Changing screens	13-11
Comment file list window.....	13-34
Communication setting window.....	13-21

[D]

Device/contact/coil search window	13-30
Devices and range that can be monitored	13-7
Display Operation.....	13-9

[E]

Error Messages and Corrective Action	13-41
--	-------

[H]

How to Operate Block List Screen	13-23
Display menu	13-24
How to Operate device test window.....	13-38
How to Operate PLC Read Screen	13-17
How to Operate SFC Diagram Monitor Screen...	13-25
Display menu	13-33
Search menu	13-29

[M]

Monitoring Mode menu	13-37
----------------------------	-------

[O]

Outline before starting.....	13-9
------------------------------	------

[P]

Password input window.....	13-19
Precautions	13-8
Program list window	13-22

[R]

Reading comment files from CF card.....	13-13
---	-------

[S]

Setting automatic scroll mode	13-16
Setting Display Format.....	13-15
Setting display mode of SFC programs	13-15
Setting SFC data storage location	13-12
Setting zoom comment display mode	13-15
Specifications	13-4
Step list window	13-32
Step No./transition condition	
No. search window.....	13-31

Switching display formats between	
decimal and hexadecimal numbers.....	13-15
Switching languages of SFC programs	13-15
System configuration.....	13-4

[T]

Test Operation.....	13-38
---------------------	-------

[Z]

Zoom window	13-27
-------------------	-------

WARRANTY

Please confirm the following product warranty details before using this product.

1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company. However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion. Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

[Gratis Warranty Term]

The gratis warranty term of the product shall be for one year after the date of purchase or delivery to a designated place.

Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be eighteen (18) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

[Gratis Warranty Range]

- (1) The range shall be limited to normal use within the usage state, usage methods and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.
- (2) Even within the gratis warranty term, repairs shall be charged for in the following cases.
 1. Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
 2. Failure caused by unapproved modifications, etc., to the product by the user.
 3. When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
 4. Failure that could have been avoided if consumable parts (battery, backlight, fuse, etc.) designated in the instruction manual had been correctly serviced or replaced.
 5. Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
 6. Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
 7. Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

2. Onerous repair term after discontinuation of production

- (1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued. Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.
- (2) Product supply (including repair parts) is not available after production is discontinued.

3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center. Note that the repair conditions at each FA Center may differ.

4. Exclusion of loss in opportunity and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to damages caused by any cause found not to be the responsibility of Mitsubishi, loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products, special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products, replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

5. Changes in product specifications

The specifications given in the catalogs, manuals or technical documents are subject to change without prior notice.

6. Product application

- (1) In using the Mitsubishi graphic operation terminal, the usage conditions shall be that the application will not lead to a major accident even if any problem or fault should occur in the graphic operation terminal device, and that backup and fail-safe functions are systematically provided outside of the device for any problem or fault.
- (2) The Mitsubishi graphic operation terminal has been designed and manufactured for applications in general industries, etc. Thus, applications in which the public could be affected such as in nuclear power plants and other power plants operated by respective power companies, and applications in which a special quality assurance system is required, such as for Railway companies or Public service purposes shall be excluded from the graphic operation terminal applications. In addition, applications in which human life or property that could be greatly affected, such as in aircraft, medical applications, incineration and fuel devices, manned transportation equipment for recreation and amusement, and safety devices, shall also be excluded from the graphic operation terminal range of applications. However, in certain cases, some applications may be possible, providing the user consults the local Mitsubishi representative outlining the special requirements of the project, and providing that all parties concerned agree to the special circumstances, solely at our discretion.

Microsoft, Windows, Windows NT, Windows Vista are registered trademarks of Microsoft Corporation in the United States and other countries.

Adobe and Adobe Reader are registered trademarks of Adobe Systems Incorporated.

Pentium and Celeron are a registered trademarks of Intel Corporation in the United States and other countries.

Ethernet is a trademark of Xerox Co., Ltd. in the United States.

MODBUS is a trademark of Schneider Electric SA.

Other company and product names herein are either trademarks or registered trademarks of their respective owners.

HEADQUARTERS	
MITSUBISHI ELECTRIC EUROPE B.V. German Branch Gothaer Straße 8 D-40880 Ratingen Phone: +49 (0)2102 / 486-0 Fax: +49 (0)2102 / 486-1120	EUROPE
MITSUBISHI ELECTRIC EUROPE B.V. Czech Branch Radlická 714/113a CZ-158 00 Praha 5 Phone: +420 (0)251 551 470 Fax: +420 (0)251-551-471	CZECH REPUBLIC
MITSUBISHI ELECTRIC EUROPE B.V. French Branch 25, Boulevard des Bouvets F-92741 Nanterre Cedex Phone: +33 (0)1 / 55 68 55 68 Fax: +33 (0)1 / 55 68 57 57	FRANCE
MITSUBISHI ELECTRIC EUROPE B.V. Irish Branch Westgate Business Park, Ballymount IRL-Dublin 24 Phone: +353 (0)1 4198800 Fax: +353 (0)1 4198890	IRELAND
MITSUBISHI ELECTRIC EUROPE B.V. Italian Branch Viale Colleoni 7 I-20041 Agrate Brianza (MI) Phone: +39 039 / 60 53 1 Fax: +39 039 / 60 53 312	ITALY
MITSUBISHI ELECTRIC EUROPE B.V. Spanish Branch Carretera de Rubí 76-80 E-08190 Sant Cugat del Vallés (Barcelona) Phone: +34 935653131 Fax: +34 935891579	SPAIN
MITSUBISHI ELECTRIC EUROPE B.V. UK Branch Travellers Lane UK-Hatfield, Herts. AL10 8XB Phone: +44 (0)1707 / 27 61 00 Fax: +44 (0)1707 / 27 86 95	UK
MITSUBISHI ELECTRIC CORPORATION Office Tower "Z" 14 F 8-12, 1 chome, Harumi Chuo-Ku Tokyo 104-6212 Phone: +81 3 622 160 60 Fax: +81 3 622 160 75	JAPAN
MITSUBISHI ELECTRIC AUTOMATION, Inc. 500 Corporate Woods Parkway Vernon Hills, IL 60061 Phone: +1 847 478 21 00 Fax: +1 847 478 22 53	USA
EUROPEAN REPRESENTATIVES	
GEVA Wiener Straße 89 AT-2500 Baden Phone: +43 (0)2252 / 85 55 20 Fax: +43 (0)2252 / 488 60	AUSTRIA
TEHNIKON Oktyabrskaya 16/5, Off. 703-711 BY-220030 Minsk Phone: +375 (0)17 / 210 46 26 Fax: +375 (0)17 / 210 46 26	BELARUS
Koning & Hartman b.v. Woluwelaan 31 BE-1800 Vilvoorde Phone: +32 (0)2 / 257 02 40 Fax: +32 (0)2 / 257 02 49	BELGIUM
INEA BH d.o.o. Aleja Lipa 56 BA-71000 Sarajevo Phone: +387 (0)33 / 921 164 Fax: +387 (0)33 / 524 539	BOSNIA AND HERZEGOVINA
AKHNATON 4 Andrej Ljapchev Blvd. Pb 21 BG-1756 Sofia Phone: +359 (0)2 / 817 6004 Fax: +359 (0)2 / 97 44 06 1	BULGARIA
INEA CR d.o.o. Losinjska 4 a HR-10000 Zagreb Phone: +385 (0)1 / 36 940 - 01 / -02 / -03 Fax: +385 (0)1 / 36 940 - 03	CROATIA
AutoCont C.S. s.r.o. Technologická 374/6 CZ-708 00 Ostrava-Pustkovec Phone: +420 595 691 150 Fax: +420 595 691 199	CZECH REPUBLIC
B:TECH A.S. U Borové 69 CZ-58001 Havlíčkův Brod Phone: +420 (0)569 777 777 Fax: +420 (0)569-777 778	CZECH REPUBLIC
Beijer Electronics A/S Lykkegårdsvej 17, 1. DK-4000 Roskilde Phone: +45 (0)46 / 75 76 66 Fax: +45 (0)46 / 75 56 26	DENMARK
Beijer Electronics Eesti OÜ Pärnu mnt.160i EE-11317 Tallinn Phone: +372 (0)6 / 51 81 40 Fax: +372 (0)6 / 51 81 49	ESTONIA
Beijer Electronics OY Jaakonkatu 2 FIN-01620 Vantaa Phone: +358 (0)207 / 463 500 Fax: +358 (0)207 / 463 501	FINLAND
UTECO A.B.E.E. 5, Mavrogenous Str. GR-18542 Piraeus Phone: +30 211 / 1206 900 Fax: +30 211 / 1206 999	GREECE
MELTRADE Ltd. Fertő utca 14. HU-1107 Budapest Phone: +36 (0)1 / 431-9726 Fax: +36 (0)1 / 431-9727	HUNGARY
Beijer Electronics SIA Vestienes iela 2 LV-1035 Riga Phone: +371 (0)784 / 2280 Fax: +371 (0)784 / 2281	LATVIA
Beijer Electronics UAB Savanoriu Pr. 187 LT-02300 Vilnius Phone: +370 (0)5 / 232 3101 Fax: +370 (0)5 / 232 2980	LITHUANIA
EUROPEAN REPRESENTATIVES	
INTEHSIS srl bld. Traian 23/1 MD-2060 Kishinev Phone: +373 (0)22 / 66 4242 Fax: +373 (0)22 / 66 4280	MOLDOVA
Koning & Hartman b.v. Haarlerbergweg 21-23 NL-1101 CH Amsterdam Phone: +31 (0)20 / 587 76 00 Fax: +31 (0)20 / 587 76 05	NETHERLANDS
Beijer Electronics AS Postboks 487 NO-3002 Drammen Phone: +47 (0)32 / 24 30 00 Fax: +47 (0)32 / 84 85 77	NORWAY
MPL Technology Sp. z o.o. Ul. Krakowska 50 PL-32-083 Balice Phone: +48 (0)12 / 630 47 00 Fax: +48 (0)12 / 630 47 01	POLAND
Sirius Trading & Services srl Aleea Lacul Morii Nr. 3 RO-060841 Bucuresti, Sector 6 Phone: +40 (0)21 / 430 40 06 Fax: +40 (0)21 / 430 40 02	ROMANIA
Craft Con. & Engineering d.o.o. Bulevar Svetog Cara Konstantina 80-86 SER-18106 Nis Phone: +381 (0)18 / 292-24-4/5 Fax: +381 (0)18 / 292-24-4/5	SERBIA
INEA SR d.o.o. Izletnica 10 SER-113000 Smederevo Phone: +381 (0)26 / 617 163 Fax: +381 (0)26 / 617 163	SERBIA
AutoCont Control s.r.o. Radlinského 47 SK-02601 Dolny Kubin Phone: +421 (0)43 / 5868210 Fax: +421 (0)43 / 5868210	SLOVAKIA
CS MTrade Slovensko, s.r.o. Vajanského 58 SK-92101 Piestany Phone: +421 (0)33 / 7742 760 Fax: +421 (0)33 / 7735 144	SLOVAKIA
INEA d.o.o. Stegne 11 SI-1000 Ljubljana Phone: +386 (0)1 / 513 8100 Fax: +386 (0)1 / 513 8170	SLOVENIA
Beijer Electronics AB Box 426 SE-20124 Malmö Phone: +46 (0)40 / 35 86 00 Fax: +46 (0)40 / 35 86 02	SWEDEN
Econotec AG Hinterdorfstr. 12 CH-8309 Nürensdorf Phone: +41 (0)44 / 838 48 11 Fax: +41 (0)44 / 838 48 12	SWITZERLAND
GTS Darülaceze Cad. No. 43 KAT. 2 TR-34384 Okmeydanı-Istanbul Phone: +90 (0)212 / 320 1640 Fax: +90 (0)212 / 320 1649	TURKEY
CSC Automation Ltd. 15, M. Raskova St., Fl. 10, Office 1010 UA-02002 Kiev Phone: +380 (0)44 / 494 33 55 Fax: +380 (0)44 / 494-33-66	UKRAINE
EURASIAN REPRESENTATIVES	
Kazpromautomatiks Ltd. Mustafina Str. 7/2 KAZ-470046 Karaganda Phone: +7 7212 / 50 11 50 Fax: +7 7212 / 50 11 50	KAZAKHSTAN
CONSYS Promyshlennaya st. 42 RU-198099 St. Petersburg Phone: +7 812 / 325 36 53 Fax: +7 812 / 325 36 53	RUSSIA
ELECTROTECHNICAL SYSTEMS Derbenevskaya st. 11A, Office 69 RU-115114 Moscow Phone: +7 495 / 744 55 54 Fax: +7 495 / 744 55 54	RUSSIA
ELEKTROSTILY Rubzovskaya nab. 4-3, No. 8 RU-105082 Moscow Phone: +7 495 / 545 3419 Fax: +7 495 / 545 3419	RUSSIA
NPP "URALELEKTRA" Sverdlova 11A RU-620027 Ekaterinburg Phone: +7 343 / 353 2745 Fax: +7 343 / 353 2461	RUSSIA
MIDDLE EAST REPRESENTATIVES	
ILAN & GAVISH Ltd. 24 Shenkar St., Kiryat Arie IL-49001 Petah-Tiqva Phone: +972 (0)3 / 922 18 24 Fax: +972 (0)3 / 924 0761	ISRAEL
AFRICAN REPRESENTATIVE	
CBI Ltd. Private Bag 2016 ZA-1600 Isando Phone: +27 (0)11 / 928 2000 Fax: +27 (0)11 / 392 2354	SOUTH AFRICA